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Paper Mill Superintendents Hold Convention

Pennsylvania-New Jersey and Southeastern Divisions Meet In Washington and Elect Officers For Forthcoming Year—Various Phases of Trade Association Work Discussed by Dr. H. P. Baker, of U. S. Chamber of Commerce, Formerly Secretary of American Paper & Pulp Association—Interesting Addresses Given at Banquet

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 23, 1929.—The joint convention of the Pennsylvania-New Jersey and Southeastern Divisions of the American Paper and Pulp Mill Superintendents' Association was held at Wardman Park Hotel here on Friday and Saturday of last week, with a large attendance.

Officers elected for the ensuing year include Pennsylvania-New Jersey Division—J. Bertwell White, Yorklyn, Del., chairman; E. C. Gildenzoph, Asbestos, Md., first vice chairman; Charles Kephart, York Haven, Pa., second vice chairman; William Wickham, Camden, N. J., third vice chairman; and J. L. Mullen, Wilmington, Del., secretary and treasurer.

The Southeastern Division officers elected include; R. J. Sprang, Canton, N. C., chairman; H. W. Dewffew, Richmond, Va., first vice chairman; C. J. Foster, Bedford, Pa., second vice chairman; W. J. Burns, Hartsville, S. C., third vice chairman; and B. K. Steadman, Richmond, Va., secretary and treasurer.

On Friday the day was devoted to the business meeting with a banquet at night, with Saturday given over to sight seeing trips about Washington.

Dr. H. P. Baker Addresses Meeting

One of the highlights of the convention was the talk of Dr. Hugh P. Baker, former secretary of the American Paper and Pulp Association and now manager of the Trade Association Department of the United States Chamber of Commerce. Dr. Baker talked on, "What's Ahead of the Trade Association." He made frequent reference during his talk to his former connection with the paper industry.

"Trade associations", said Dr. Baker, "have been functioning successfully for many years in this country. For eight years it was my pleasure to manage the association representing the pulp and paper industry of the United States. That organization celebrated its fiftieth anniversary two years ago. We were fifty years old and in continuous existence all that time, and we had accomplished some very worthwhile results.

"It seemed to some of the leaders of the paper industry", continued Dr. Baker, "that it would be very interesting and perhaps helpful if we could determine reasonably well the effect upon the paper industry of fifty years of organized effort. We went back through the minutes of annual meetings of the association for fifty years, back to the first call for a meeting sent out in 1878 by a group of paper manufacturers in and about Springfield, Mass.

"You would be interested in that first call, because it is a statement that sounds very much like a program for an association meeting of today. That first call indicated that there was over production in the paper industry in 1877, that there was price-cutting, that there was invasion of sales territory, that there was serious foreign competition, and that there were practices that were both harmful and wasteful. Therefore, it was suggested that it would be a good thing for the paper manufacturers to get together to discuss conditions and to see if helpful results would not accrue from organization.

"And that first call, as indicated, sounds like the program for a meeting of such an organization as yours or any other trade association in industry today, because the problem with which you are confronted today are very much the same that confronted the paper industry in 1877 and these are, over production, price-cutting, invasion of sales territory, wasteful and harmful practices making for unfair competition.

Value of Organized Effort

"In going back through the minutes of the fifty annual meetings of that organization, the evidence as to the value of organized effort in the paper industry was very different from what we had expected. We had assumed that fifty years of association work would indicate certain definite and tangible results; that because the association had developed certain statistical reports, had made some progress toward uniform cost methods, trade extension, and so forth, that some very definite and tangible results had been achieved for the industry. But the evidence proved that the greatest values that had accrued to the paper industry from fifty years of organized work were what might be called the intangibles of association work— better acquaintanceship, good fellowship and confidence."

Dr. Baker told the convention that trade associations have come to stay in American business. Conditions are such in industry today, that if for any reason the association serving the industry were wiped off the map tomorrow, in six months doubtless the industry would have to come together again for unified action in meeting its common problems. Dr. Baker took up all the various phases of trade association work with which he is thoroughly familiar.

During the business sessions on Friday morning, J. E. Blosser, chairman of the Pennsylvania-New Jersey Division presided while during the afternoon business sessions, William Brydges, chairman of the Southeastern Division was the presiding officer.

C. W. Darr Welcomes Delegates

An address of welcome was made to the delegates by Charles W. Darr, president of the Washington Chamber of Commerce, with a

(*Continued on page 66*)

Premier Taschereau Discusses News Print

Makes Important Announcements Regarding News Print Industry At Investment Bankers Convention At Quebec—Declares That Renewal of Price War Would Again Cause Governments of Ontario and Quebec to Intervene In Order to Bring About Stability.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., October 21, 1929.—The Hon. L. A. Taschereau, Prime Minister of the Province of Quebec, made some important announcements regarding the news print industry at the convention of the Investment Bankers Association of America, which has just been held in Quebec. These announcements he supplemented by an interview with press representatives, at which he declared that if the renewal of the price war in the news print industry foreshadowed in published reports of conferences now being held in Montreal materialize, the Governments of Ontario and Quebec will again intervene to bring about that stability necessary to the successful operation of this greatest Canadian industry.

The Premier's Remarks

The Premier's whole attitude towards the news print industry in relation to the economic development of Quebec and of Canada was enunciated with considerable emphasis before the bankers' convention. He said:

"The Dominion of Canada, while it buys from the United States a great deal more than it sells to that country, is nevertheless provider of a substantial amount of goods of which the United States stands in need. In recent years this export trade has fluctuated between $400,000,000 and $500,000,000; just about one-half of this total consists of the products of the forest and about one-quarter of the total consists of the manufactured forest product called news print paper.

"How vital to the welfare of Canada the paper industry is may be gathered from the fact that it represents a capital investment of $686,000,000, an increase of 184 per cent in ten years; that the value of its output has increased in the same period by nearly 100 per cent in spite of a pronounced fall in prices, and now amounts to $233,000,000, and that it contributes a net amount of some $194,000,000 to our export trade, and is therefore responsible for more than the whole of Canada's favorable trade balance in the year 1928, which was about $142,000,000. Without the pulp and paper exports, Canada would that year have an unfavorable balance of over $40,000,000. Of these exports approximately 75 per cent consisted of news print paper, the larger part of the balance consisting of pulp for the manufacture of paper.

"The production of news print in Canada in 1913, it may be mentioned, amounted to 350,000 tons; in 1929, it was 2,381,000 tons. In other words, in fifteen years there has been an increase of 580 per cent or nearly 40 per cent over the fifteen-year period. During the same period the consumption of news print in the United States has risen from 1,481,000 tons to 3,584,000 tons, an increase of 142 per cent. That is, the consumption in 1928 was almost two and a half times what it was in 1913. While there has been this large increase in consumption in the United States, the output of the mills in that country failed to keep pace with the increased demand, production in 1928 being only 9 per cent greater than in 1913.

"Practically the whole of this deficiency has been made up by increased imports from Canada. In 1913 the United States manufactured the larger part of its domestic requirements. In 1918 Canada's share in this market had risen to 32 per cent, in 1923 to 40 per cent, and last year Canadian mills were called upon for 1,926,000 tons of paper, equivalent to 54 per cent of the United States requirements.

"The situation during the last year was very unsatisfactory owing to overproduction and unwise competition, resulting in prices not only ruinous to the industry itself but liable to affect the prosperity of the country and the provinces of Quebec and Ontario. This situation became so serious that the Governments of Quebec and Ontario took active interest, first to check the building of new mills, and secondly to co-operate with the paper industry, so that a reasonable return could be obtained from the products of the forests in which the Governments were vitally interested.

"This result has not yet been obtained, but I have sufficient reason to believe that the situation is being constructively handled to bring about not only reasonable prices for the news print product, but in such a way as to secure stability and an orderly development of the paper industry, so that publishers will be able to secure an adequate supply in the future at fair prices.

"The timber situation in the United States has become so serious that, while there has been a large increase in the consumption of news print, the output of the mills in that country has failed through the lack of wood to keep pace with the increased demand, production in 1928 being only 9 per cent greater than in 1913. Practically the whole of this deficiency has been made up by increased imports from Canada. Thus, it would seem that the publishers of the United States are now depending for their paper supply to a very marked extent on Canada, and it is important to the publishing interests that the Government of this country take a keen interest in the situation, as the newspaper manufacturers' raw materials is also the raw materials of the publishers.

"In order to propagate the forests and create a permanent supply of wood, the Government requires money and this can only be obtained by assessing the industry. If they do not do this, the supply will run out.

"In the long run, the publishers will be the greatest sufferers, if the Government does not take this situation in hand. A sequence of results will be, first, the destruction of the financial credit of the industry; second, a shortage of paper, and then higher prices which will undoubtedly cause great embarrassment and financial loss to the publishers.

"I will only add this: A border line of 3,000 miles separates from, or rather connects, the United States and Canada. It is a thin line, not protected by a soldier or a gun. We are, therefore, good neighbors, living on the same continent with common interests. Americans are welcome here; we need their capital, energy and enterprise. Let it be well understood that, when here, they will receive a fair treatment and be placed on the same footing as our own people, but they must co-operate with us, live, if I may say, a Canadian life and not injure our basic industries by unwise competition. Pardon my words if they are harsh, but public opinion will not agree to be dictated to nor our national resources imperiled for the benefit of a most lovable neighbor."

Says Situation is Government's Own Fault

Commenting on Premier Taschereau's remarks, the *Montreal Star*, which is owned by Lord Atholstan, says:

"Presumably Mr. Taschereau felt a little diffidence about talking so plainly to the foreign companies. It was his policy which had given away the rights to cut the forests and timber leases with an indiscriminate hand for years past. It was his policy that had sanctioned and approved the erection of mills long after his own experts had warned him of the danger of so doing. It was his policy of hole-in-the-corner sales attended by the favored few that had been directly responsible for overproduction and ruinous competition. By his policy he has not only threatened an important basic industry with bankruptcy, but he has stripped our forests until there is no longer sufficient timber in sight or available to last

for the next twenty years. He has dissipated this 'Capital'—the natural resources of the Province—by extravagant administration."

The Price of Newsprint

Meanwhile there are all sorts of rumors regarding the possibility of an increase in the price of news print. The *Montreal Gazette* says:

"Interest in the news print situation was further kindled by the remarks of Premier Taschereau at Quebec, in which he indicated his belief that a higher price for news print paper was warranted. While a stumbling block to an increase in the price for next year is a long term contract with one of the largest consumers, made at a time when the price-cutting war was at its keenest, intimations are not lacking that there may be a way of overcoming the tie-up in a manner that would be satisfactory in the long run to all concerned."

On the other hand, O'Brien and Williams, one of the leading stock-broking firms in Montreal, in their current market letter, have this to say of the situation:

"Although stranger things have happened it does not seem likely that paper interests will succeed in substantially advancing the price of news print, a matter which, it is said, has come up for discussion in recent gatherings of paper representatives. This has been a lean year for the paper companies, some of which have no doubt had difficulty in earning much beyond preferred dividends. However, the situation is better than it was at the beginning of the year and there is no question but that the industry has seen the worst. Whether rightly or wrongly the International is accused of rocking the boat at a critical period in the industry's history. Combines are certainly not in the public's interest but there is such a thing as carrying the cut throat practice too far. It is not right that Canada's forests should be cut down, while the huge capital which is invested in Canada's greatest industry is unable to do much more than make a new dollar for an old one."

Disquieting News From Newfoundland

Another factor in the present situation is the disquieting news which comes from Newfoundland regarding the possibility of a large extension of the news print industry there. Reliable information is to the effect that a proposal is now actually before the Newfoundland Government for the erection of a news print mill on the east coast of Newfoundland, with a capacity of 1,000 tons per day. A condition of this proposal is the sale by the Government of 10,000,000 cords of pulpwood from Labrador. The information adds that "important New York consumers of paper are said to be interested in this proposal." In Montreal this is interpreted as meaning that the Hearst interests are the prime movers in the scheme, and it is known that the Newfoundland Government, whose finances are in an unsatisfactory condition, are very anxious to foster any industry which would bring revenue to the country.

From Newfoundland it is also authoritatively stated that a timber area of 678 square miles has recently been sold to the International Paper Company.

E. B. Eddy Developments

A report is going the rounds that the E. B. Eddy Company plans the erection of a $1,500,000 mill for the manufacture of fine paper on its property at Hull, Quebec. It is said that five fine paper machines will be installed, and that this will enable the company to devote its existing mill to news print alone. The present output of the company is 125 tons of news print, 7 tons of tissue paper, 25 tons of board, 8 tons of bags and manila, 15 tons of wrapping paper, and 10 tons of book and writing paper. The company owns 2,000 square miles of timber limits on the Gatineau and Ottawa rivers. These limits adjoin those of the International Paper Company, which, it is generally understood, have a substantial interest in the E. B. Eddy Company.

A Record Run

The Great Lakes Paper Mill at West Fort William recently established a record for a 24-hour run when 162 tons of paper were run through the 304-inch machine during the 24 hours.

I. P. Makes Improvements at Corinth

CORINTH, N. Y., October 21, 1929.—The International Paper Company has broken ground here for the construction of a large new plant addition which when completed will allow of a large increase in production. The project will entail the expenditure of over $500,000 and with other planned improvements will mark a change of adaptation in the paper mill to a degree which will make the local mill one of the biggest jobbing plants operated by the firm in this country. Approximately 75 men are employed in excavation work prior to actual construction of the new plant under the supervision of Wallace Rock.

Officials of the firm and machinery manufacturing representatives have been inspecting three of the paper machines which will be adapted to the production of specialty paper between now and January 1. Machines 5, 6 and 7 will, it is understood, be the first to be changed over and these will probably be equipped with double calender stacks and new winder material to care for the production of colored print and wall paper, depending upon the season for this output and the amount of orders sent to the local plant. In addition it is understood that there will be about 21 new beaters constructed in the new section although it is expected that this work will take considerable time. The entire expansion program includes numerous changes in the relocation of machinery and necessary equipment and will probably mean the enlargement of the working force to a great extent.

Besides manufacturing news print, colored print and wall paper the mill today is handling specialty orders of nearly all descriptions according to the market demands. The changing of the equipment will make a total of eight paper machines out of the entire ten which will be accessible to the production of news print and specialty papers. Enlargement of the finishing rooms of the mill and other changes to accommodate the improved business in the future have not been announced although it is understood that this is also planned in conforming with the expansion of the other departments.

Send Wood Pulp To South America

PORTLAND, Ore., October 19, 1929.—The first cargo of wood pulp to be taken to South America from the west coast was loaded by the steamer West Camargo, at Bellingham, Wn., the week of October 14. This shipment of 600 tons of paper pulp is a new item on the cargo list for this steamer, although she has carried news print in rapidly increasing tonnage on all of her trips. The paper mills which have been established at Buenos Aires will call for more and more pulp, it is said, and this will probably supplant the news print eventually.

The West Camargo is one of the McCormick steamship line which has been carrying news print on its ships for a number of years. The increase in this news print cargo indicates that the use of news print from European countries and from the east coast is on the wane. Four years ago the first shipments of news print in the McCormick ships averaged from 600 to 800 tons for the five vessels in the fleet. Now with nine vessels the tonnage runs far above that. Last summer the West Camargo carried as high as 2500 tons of news print on a single trip.

Captain N. E. Carlson says that the fact that paper is cheaper on the west coast has been a factor in increasing the trade. Furthermore the distance of the Andes forests from the city and the fact that the timber in South America is unsuitable for pulp making also tend to increase preference for western pulp and paper.

F. L. Higginson Elected A Director

F. L. Higginson has been elected a director of the International Paper and Power Company. Mr. Higginson is a partner in Lee, Higginson & Co., and is widely known in financial circles throughout the country. His election adds another New England man to the International Paper and Power Board, which already includes Walter C. Baylies, Frank D. Comerford, John R. Macomber, Gifford K. Simonds, Philip Stockton, and Daniel S. Wing.

Pennsylvania Paper Mills Continue Active

Manufacturers of Book Papers and Fancy Writings Enjoy Excellent Demand for their Products —Keen Competition Experienced on Coarse Paper Grades and Converted Lines— Holiday Specialties In Improved Request—Tissues Show Strong Undertone

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., October 21, 1929.—After a fortnight of keen interest in the paper market there was a slight reactionary tendency on the part of buyers of many lines of paper. The quietness in the distributive field did not extend to mill representatives and wholesalers of paper goods, whose business has reported holding well to the levels of the past month. Though there was not as active a demand, the market was firm in so far as prices were concerned.

While manufacturers continue active, there was a lessened inquiry for future deliveries. Much competition for holiday business has sprung up among manufacturers of coarse grades of papers and converted lines of bags, containers, boxes and shipping cartons. Board manufacturers still linger in the competitive class. Fine paper manufacturers are engaged in production of certain lines that are popular among the larger printing and publishing houses, with book papers and fancy writings holding first place. Fancy papers in writings, papeteries, announcements, greeting card stocks, and allied engraving specialties, are in demand for the holidays. Corrugated products have been moving in goodly volume, with steady values. Glassines and cellophane are among the needed holiday specialties with requirements steadily expanding. Tissues continue firm, with more activity in the holiday lists.

Many of the board manufacturers in the local trade are buying their paper stock directly from a single wholesaler who contracted to supply the mills at certain prices, and other wholesale paper stock dealers are obliged to sell directly through the single firm assigned to supply the manufacturer. This has been the situation for many months so that the common grades of paper stock have gradually dwindled in value. Under these conditions paper stocks of the commoner sorts are kept at a minimum which permits of lower cost of production of paper board. The better grades are strong because of lack of supplies to meet appreciable purchases by the mills.

T. H. B. Smythe To Address Paper Merchants

When the members of the Philadelphia Paper and Cordage Association meet at the Adelphia Hotel on Friday of this week at the luncheon hour, they will be addressed by T. H. B. Smythe, of the J. L. N. Smythe Company, who is scheduled to discuss the relationship between the jobber and manufacturer and the jobber and consumers of paper. There has been admitted to membership of the Philadelphia Paper and Cordage Association the Standard Paper Company, represented here by Clinton U. Pierce, with mills in Bellows Falls, Vt.; and Joseph Parker and Son Company, 349 Broadway, New York, the oldest blotting paper manufacturers in the country, represented here by Louis H. McGreen.

A. B. Sherrill To Retire From Riegel & Co.

Outstanding in the personalities of the active leaders of the Quaker City paper trade, the departure of Arthur B. Sherrill from its ranks, as announced last week by Riegel & Co., Inc., will be much regretted, Having been associated with Riegel & Co., Inc., since the reorganization of the firm under the presidency of George Riegel more than a quarter century ago, Mr. Sherrill has been one of the most active leaders in the affairs of the Paper Trade Association and its many movements. His retirement will become effective January 1, 1930. With the retirement of Mr. Sherrill from the company the firm will become the Paper Merchants, Inc., the new title including the reorganization of the business under ownership of three former members of the staff and executive forces. The Paper Merchants, Inc., will have in its official staff the following: President, Edward McCorkendale; treasurer, Winfield Predmore, and secretary, R. L. McCall.

George W. Ward Honored

President George W. Ward, of the D. L. Ward Company, has returned to his desk here after having attended the Direct Mail Advertising Association Convention in Cleveland last week where he was honored by special testimonial at the annual banquet held on Thursday evening. During the banquet, President Tim Thrift, of the Direct Mail Association, presented Mr. Ward with an artistically designed testimonial which was made in the form of a resolution introduced by the membership and presented by the president of the association. For three years Mr. Ward had been a member of the Board of Governors of the Direct Mail Association and last year declined to be renominated again. The Testimonial, dated January, 1929, is in the form of a tribute of appreciation to his work on behalf of the Direct Mail Advertisers and regrets that he could not again accept the nomination to the Board of Governors. It was hand designed on parchment and richly framed.

Raymond & McNutt Exhibit at Poor Richard Club

An exhibit of papers and specimens of actual work done on these grades have been placed on exhibition at the Poor Richard Club by the Raymond & McNutt Company, with headquarters in the Sheridan Building. The exhibit comprised various papers handled by the firm and included the Strathmore, Worthy, Dill and Collins, and District of Columbia products. A special room was assigned the Raymond & McNutt exhibit by the Poor Richard Club, and the exhibition of grades of papers adapted for advertisers' use continued for two weeks. Leonard Raymond, head of the firm, who has been sojourning in the West Indies on a month's vacation, will return to his desk this week.

Howard W. Taylor Returns From Europe

President Howard W. Taylor, of the W. C. Hamilton and Son Paper Company, Miquon, who has been spending the summer in Europe recuperating from ill health, is back at his desk much improved from his prolonged vacation abroad. He spent the time in a tour of England and France gaining his health in the interim. Upon his return to duties he found the mills well sold ahead and running on full time as the result of the broadening of demand for the line of fancy writing papers and other products manufactured by the Hamilton Mill, which have been added by many distributors in the past year or so in all parts of the country under expansion policies of the manufacturers.

General Electric Co. Installs Motors

The General Electric Company is installing new electric motors in the plant of the Container Corporation of America. The new motors will replace the engine which recently was put out of commission after a break down. The new motors are of the direct current variable speed type.

Benjamin Thomas To Manage Container Corp.

With the return of former General Manager W. G. Carey from a summer trip in Europe and his retirement from the Container Corporation of America, his duties as general manager of the Philadelphia mills are to be taken over by Benjamin Thomas, formerly mill manager. Mr. Thomas, who joined the Philadelphia branch of the Container Corporation of America about eighteen months ago, came here from the Chicago headquarters to assume management of the board mill attached to the plant. His assistant, Hyman Joachim, succeeds him to the managership of the mill, while Jack Wyeth remains as superintendent. Mr. Thomas now

directs both the container and mill departments. Mr. Carey next month becomes associated with the Philadelphia plant of the Yale and Towne Manufacturing Company as assistant to the vice president.

W. C. Carpenter Recovers From Illness

W. C. Carpenter, of the Paper Manufacturers Company, who recently recovered from an operation for appendicitis, is back at his desk following a brief recuperation sojourn at the shore. His illness was complicated by a severe attack of hiccoughs which lasted eleven days but eventually succumbed to the treatment of the physicians after causing anxiety as to the outcome of the operation. T. W. Coar, of the firm, who spent the summer in Germany, is back at his desk.

Individual Drinking Cup To Build

The Individual Drinking Cup Company, manufacturers of the Dixie Cups, has planned an extension of its plant at Easton, Pa. The company has been receiving bids for the addition of a wing to its present mill and converting plant. It is the purpose of the manufacturers of the Dixie Cups to provide another wing to the plant to take care of its growing business. The present extension follows several building expansions that have taken place since post war years.

Scott Paper Co. Shows Increased Sales

Gross sales of the Scott Paper Company, of Chester, Pa., during the month of September were $892,455, an increase of $181,365, according to a report made during the week. For the nine months of the current year ended September 30, the sales totaled $5,949,281, an increase of $766,534 over the previous year's record for the same period. The September sales were the highest in any month in the history of the business. The increased production which was facilitated by the installation of the mammoth machine built by the Moore and White Company of Philadelphia, has enabled the firm to materially increase its production at a record speed of operation and daily tonnage. Following the installation of the machine this summer the Scott Company placed on the market a new low priced roll that has also added to its business in the past quarter. The Moore and White Company is now engaged in the erection of another machine which shortly will be ready for operation.

Wholesale Waste Merchants Meeting Postponed

Owing to the inability of many members to attend the quarterly meeting of the Philadelphia Wholesale Waste Merchants Association on account of the Jewish holidays last week, the session was postponed until a later date. The meeting was scheduled to be held at the Lorraine Hotel on Thursday of last week when a dinner was planned in conjunction with that gathering. No definite date has been set as yet but late October or early November will be decided upon for the postponed session.

Du Pont Cellophane Co. Changes

The Du Pont Cellophane Company announces the transfer of Sterling Thompson from the New Jersey territory to a Mid West territory, covering St. Paul and Kansas City. Mr. Thompson will make his headquarters at the Chicago Office of the Cellophane Company, at 111 W. Washington Street.

C. W. Bollinger, formerly of the Chicago Office, will take over Mr. Thompson's territory in Northern New Jersey.

The Cellophane Company also announces that J. A. Hart is now a member in the advertising and sales promotion section.

The opening of the second Cellophane manufacturing unit at Old Hickory, Tenn., has brought about the removal of the order section to the plant proper. Harry B. Williams will be at Old Hickory as the sales representative of the order section. E. K. Lapp, formerly of the order section in New York City, will be the sales representative of the order section, at Buffalo, New York, at the plant there.

Conklingville Reservoir Nearly Completed

ALBANY, N. Y., October 21.—Construction of the Conklingville Reservoir which is being financed by leading paper mill concerns of Northern New York will be completed in November and incidentally lead the way to huge power developments planned in this district. Addition of 86,000 units of horsepower is planned by the New York Power and Light Corporation with the enlargement of the noted Spiers Falls plant, according to announcement made this week. With the additional energy Spiers Falls will become a 100,000 horsepower station, the largest in the state next to the development at Niagara Falls.

Still further increases in power expansion on the Upper Hudson River district are forecast in the recent announcement that the Mohawk-Hudson Corporation is negotiating with the Union Bag and Paper Company, at Hudson Falls, which involve proposed construction of a new plant at Fenimore to develop 75,000 horsepower. The first of the new plants for the Mohawk-Hudson system to be placed in operation will be a 65,000 horsepower unit situated just below the Conklingville Dam on the Sacandaga River. This is under construction now and will be placed in operation next spring when the great lake back of the huge dam has been formed.

The enlargement of the Spiers Falls plant marks a signal event in power development in this area for the Spiers Falls dam was erected in 1903 after several years of battling with the Hudson River current at that point. With the enlargement it will become the greatest hydroelectric unit in the system and will alone exceed the capacity of two of the large steam power stations in the Mohawk-Hudson network. Officials claims that the new development will serve to relieve such conditions as were experienced in September when extremly low water forced continuous operation of the company's steam plants besides greatly handicapping many of the paper manufacturing industries in this district.

The addition to the Spiers Falls plant will be completed in December 1931 and is expected to cost more than $1,000,000. The site has been regarded as the greatest on the Hudson River, utilizing a fall of eighty feet in the river in a distance of several miles. No drop existed at Spiers Falls prior to the construction of the dam in 1903 by the late Eugene Ashley, pioneer pulp and paper manufacturer. He built the dam at a naturally strategic point and quarried stone for the masonry from rock ledges on both sides of the river. Ashley, as a pioneer, envisioned practically all of the modern superpower network that has come into existence since 1900 when he launched his project. The construction of the dam involved many hazards and was frequently blocked by financial difficulties. When it was completed it was regarded as the fourth largest in world being 1,570 feet long and 157 feet high.

News Print Shares Rise

MONTREAL, Que., October 14, 1929.—Public optimism regarding rumors and reports in New York and Monteral of private meetings of executives of news print manufacturing companies, which might result in an increase in the price of news print, was reflected in the trading of these stocks on the Montreal Stock Exchange today.

The stocks of companies manufacturing news print was in heavy demand throughout the entire session on the Exchange, with the majority of these issues closing at much higher levels. Though not the most active, Port Alfred Pulp and Paper Company recorded the heaviest gain of the group, finishing the day at $94, or $4 higher than its closing price of Saturday. Wayagamack Pulp and Paper Company scored an advance of $3 to $89, while Price Brothers followed with a $2 appreciation to $102, and Fraser Companies improved $1 to $44.

Abitibi Pulp and Paper was quite active and climbed up to a high mark of $57.25. Profit-taking at this point, however, hammered the price back to $55.75, where it still showed a small increase over its previous close.

Ontario Paper Manufacturers Fairly Busy

Fine Paper Mills Speed Up Production Substantially In Order to Meet Unusually Heavy Demand for Practically All Standard Grades—Toronto Paper Distributors Book Numerous Small Orders, But Find Large Sized Tonnages Hard to Secure At Present

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., October 21, 1929.—While a fair amount of business is passing in wholesale paper circles in Toronto and district, the fact remains that distributors are finding it slightly harder to book orders for tonnage of any size. Small orders are bulking up well and the average is being well maintained but it is under greater effort from salesmen than was called for earlier in the season and before vacation period set in. This is probably due to a falling off in business generally thoughout the province of late, although it is generally agreed that the fall months hold much promise for really good business once the buying movement gets under way.

On the other hand, the manufacturing end of the paper business is fairly active, with demand for all classes of fine papers, particularly, keeping up remarkably well. Following a rather more than seasonal slump in the summer months, the mills of the fine paper manufacturers have speeded up their operations substantially and for the most part are now running at or close to capacity. The outlook for the balance of the year, although favorable, is hardly expected to reach the peak in production attained at the same time in 1928. The fine paper industry is exceptionally sensitive to business conditions and the tie-up of the wheat crop, together with a smaller harvest, has been reflected to a certain extent in operations of the industry.

Unlike its companion, the news print industry, the fine paper business was not encumbered by the problem of over-expansion. Working at capacity for the greater part of the year, the output from the mills never became a drug on the market. Sales rose to high levels while earnings benefitted accordingly. However, though the fine paper manufacturers started the current year with excellent prospects, production in the summer months fell slightly below that of last year. Though a slump at this season is always expected, apparently buyers were unwilling to commit themselves in view of crop conditions in the West. This slump has passed and the mills are now operating at a high rate of capacity. A factor which makes the situation favorable for the paper makers is the unlikelihood of any of the news print machines being turned over to the manufacture of fine papers.

Central Group Safety Matters

A meeting of the central group of paper mills coming under the purview of the Ontario Pulp and Paper Makers' Safety Association was held at Merritton a few days ago under the auspices of the Garden City Paper Mills, Ltd., with Paul Buss, of Provincial Paper, Ltd., as chairman. Thirty-eight delegates, representing practically all the mills in the Niagara Peninsula, were present at the meeting and the affairs of the group were intimately discussed, with special emphasis on the accidents that had taken place during the past six or eight months. These accidents were considered in detail and suggestions were forthcoming as to how to prevent a recurrence in every case. Prior to the meeting the secretary-engineer, A. P. Costigane, visited a number of the plants and in almost every case found that house-keeping and protection of machinery were receiving the attention of the members. On the whole the showing made was eminently satisfactory, with the exception of two cases where much has yet to be done before the plants can be considered up to standard. So far during 1929 the accident record of the pulp and paper industry in Ontario in all the groups has shown a decided advance as compared with the record of 1928, according to Mr. Costigane, who added that the Association was hopeful that the record will be continued to the end of the present year.

The export of pulpwood from Nova Scotia forest areas continues at a rapid rate and before the shipping season ends a new record will have been set for the amount shipped to the United States for manufacture. From practically every port in the province cargoes have gone forward while almost all wood lot owners have reaped a harvest from this source. Timber cruisers and surveyors are at present looking over all available stands in Nova Scotia, many employed of course, by the Mersey Paper whose mill at Brooklyn, Queen's County, will be ready for production of news print by early December. Already an enormous pile of pulp wood is on hand at the plant and as the weeks go by more wood is going forward to Brooklyn from practically every portion of the province where it can be purchased. Under its agreement with the Nova Scotia Government the company must first cut on its lands in Cape Breton, and already extensive surveys have been made by company surveyors with a view to commencing cutting in that section during the winter months. Meanwhile the company has had representatives out through, the province purchasing from private timber holdings all available wood.

Many Men Will Cut Pulpwood

Recent advices from Port Arthur, Ont., say that there is every indication of a big season in the woods in the line of pulpwood cutting. Contractors are already placing orders for men and large gangs have been shipped to the camps. With bush work slightly above the average of past years a big percentage of the unemployed will be taken care of. Enough men are available in the Port Arthur and Fort William districts for present needs and with the shut down of the freight sheds and close of navigation the supply will be augmented by several hundred. Pulpwood, both for export and local consumption, is in greater demand this season than last and it is anticipated that many men will be employed throughout the coming months. Wages for pulpwood cutters and piece work are a little higher than the range of wages and prices paid by contractors last season. So far as tie making is concerned in the Thunder Bay district conditions are very quiet.

At present only one contractor is operating on an order for spring delivery on some 400,000. About half of this amount has been cut and watered ready for shipment. Tie makers will find little work at the head of the lakes this season unless conditions change. The Abitibi Power and Paper Company will employ considerably more men in their pulpwood operations this season than last. There are 1,200 men at work in the woods now and operations of the company will centre at Mile 168, 122 and 138 of the Algoma Central Railway where headquarters camps are established. At Puskasaw there will also be added activity as there are 230 men there engaged in cutting pulpwood. The reason for added activity this year is that the surplus of reserve of wood is almost exhausted at the local mill and it is necessary to add to this store.

Will Build Rayon Plant in Nova Scotia

Frank Stanfield, of Stanfield's Ltd., of Truro, N. S., is said to be at the back of a new enterprise which will build a plant in Queen's County for the production of rayon silk from wood fibre. It was announced some time ago that Stanfield's might go into the rayon field, but apparently active steps have been delayed until the present. Until this new departure, Stanfield's confined its activities to the manufacture of high-grade woolen underwear. Operations of a rayon manufacturing unit would undoubtedly add still further

to the strength of the company. In respect to the shortage of sulphite pulp, raw material used in the manufacture of rayon, Stanfield's would be in an advantageous position, inasmuch as the Fraser companies are now completing a plant which will be devoted to the production of this commodity.

Alliance Mills Overcome Difficulties

Alliance Paper Mills, Ltd., Toronto, consolidating the concerns formerly known as the Lincoln Pulp and Paper Company, Ltd., Ritchie & Ramsay, Ltd., and the Georgetown Coated Paper Mills, Ltd., has now started on the second year of its existence. Accordingly it is now possible to review the position, although officials state, there were difficulties to be anticipated in the very nature of an amalgamation of this kind. For example, there was the matter of the organization of the sales staff, the merging of the New Toronto coating plant with the Georgetown coating plant, and various other preliminary work of similar character that presented itself. Moreover, there was a great deal of reconstruction work to be done as well as much replacement and renovation of existing mechanical equipment. It is stated that all the difficulties have been overcome in a satisfactory manner and the various plants have been brought to the desired point of operating efficiency. The past year's record has fully come up to expectations and the outlook for the second year is such as to inspire confidence.

Notes and Jottings of the Trade

T. L. Crossley, of the Industrial Laboratories, Toronto, has been spending some time in Philadelphia and Camden, N. J., in connection with educational work in the pulp and paper industry. He was also at Lincoln, N. H., and vicinity, where, according to Mr. Crossley, increasing interest is being shown in educational matters among the board mills.

F. B. Friedlander, president of C. P. Whiting Company, Inc., Newark, N. J., was a business visitor in Toronto a few days ago.

The Board Section of the Canadian Pulp and Paper Association held a meeting in Toronto last week at which representatives were present from most of the board mills in Ontario and Quebec. Matter of internal economy and policy were discussed and the business was largely of a routine character.

The Ontario Pulp and Paper Makers' Safety Association have placed an order with the printers for their coming year's calendar. As usual the calendar contains on each sheet striking illustrations designed to show the effects of accidents in the pulp and paper mills and how they may be avoided. The legends are done both in English and French.

The Backus-Brooks Company are considering the advisability of erecting a fiber plant at Fort William. Plans for the additional unit are not yet completed, according to S. B. Backus, vice-president of the Backus-Brooks Company, but the prospects for the culmination of the enterprise are good. In discussing the paper situation Mr. Backus said that the outlook for the immediate future was, in his opinion, brighter than for some time. The mill at Fort William is turning out over 300 tons daily of news print and there is every indication that the present output will be maintained.

N. Powter, of the Toronto office of the Howard Smith Paper Mills, advertising department, attended the Direct Mail Advertising Convention in Cleveland, making the greater part of the journey by aeroplane with the Ford Reliability test flight.

Southern Paper Trade Elects Officers

NASHVILLE, Tenn., October 21, 1929.—The Southern Paper Trade Association held its semi-annual meeting in Nashville, October 5 and the following officers were elected for the ensuing year:

President—J. N. Blackley, Louisville Paper Company, Memphis, Tenn.

Vice President—W. G. Curry, Martin-Curry Paper Company, Jackson, Tenn.

Secretary and Treasurer—L. M. Hall, Archer Paper Company, Chattanooga, Tenn.

Way Cleared for Big Development

The Powell River Company, one of the biggest pulp and paper concerns on the Pacific Coast, is to be awarded the power right on the Lois River, and the way is thus cleared for one of the most notable projects yet started in the industry west of the Rocky Mountains. This has been made possible by the fact that the Consolidated Mining and Smelting Company, the gigantic mining concern controlled by the Canadian Pacific Railway, has withdrawn from the fight for the power on the Lois River, a magnanimous action upon which much gratification has been expressed by the representatives of the paper company. The Powell River Company has agreed to start without delay a great paper-making metropolis sixty miles north of Vancouver.

The company will spend from $6,600,000 to $8,000,000 by way of providing the first unit of electric power under the new plans and the installation of another papermaking machine to make use of the additional power thus created. The added output of paper will be 35,000 tons annually.

Today, Powell River mills use in the neighborhood of 50,000 horsepower, most of it electric energy generated from the fall of water from Powell Lakes to the sea.

Ten miles south of Powell is Lois River, on which will be built a new power plant which eventually will be able to transmit 32,000 h.p. to the mill over high-tension wires. About half of this total capacity is to be developed during the next year or two, so that from 14,000 to 15,000 horsepower will be available for another great paper-making machine and other incidental machinery.

A. E. McMaster, general manager of the Powell River Company, said his concern must make more power or drop some of its markets. The first unit to be installed on Lois River, he said, would increase the Powell River paper output by 35,000 to 37,000 tons a year, or about 30 per cent.

Fourteen thousand h.p. would be used and while the total cost evolved had not been definitely determined, it would run at least to $6,000,000, and possibly considerably more.

"The time element," Mr. McMaster said, "is extremely important to us. As soon as we have permission I am going to press our engineers to get us paper as soon as possible. It is very essential that we get paper from the added plant by the middle of 1931."

After a tour of investigation in eastern Canada and the United States Mr. McMaster said he believed that the whole paper situation would show a great improvement in the next few years.

The Powell River Company is headed by Minneapolis financiers, and while its main office is in Vancouver, it also has an office in Minneapolis. Its leading officials are: D. F. Brooks, president; M. J. Scanlon, vice-president; P. A. Brooks, secretary; A. S. Brooks, treasurer, all of Minneapolis; S. . Brooks, executive vice-president, and A. E. McMaster, general manager, both of Vancouver.

The enterprise was inaugurated in 1911, and since then it has had a remarkable growth. Its present mills at Powell River, B. C., have a daily capacity of 950,000 lbs. of news print; 720,000 lbs. of ground wood; and 260,000 lbs. of sulphite fibre. All of its products are shipped from the mills by water, with deep sea loading facilities.

Aside from the manufacturing plant itself, the company has extensive holding of timber along the coast line of Vancouver Island and the mainland. Between 9,000,000 and 10,000,000 feet of timber are each month converted into paper and pulp. Some of this comes from the company's own camps, but a great proportion is bought in the open market from independent logging operators, affording employment for hundreds of loggers up and down the coast. An ideal pulp is made from about 40 per cent spruce with a mixture of hemlock and birch.

The Consolidated Mining and Smelting Company had applied for the power now to be granted to the Powell River Company in order to establish a smelter on the Pacific Coast. It has now made other arrangements which will ensure the smelter being established.

Paper Demand Fairly Satisfactory in Boston

Practically All Grades of Fine and Coarse Papers and Specialties In Excellent Request—Improvement In Paper Market Encourages Hopes of Better Prices In Near Future—No Radical Changes In Paper Stock Market—Twine In Stronger Position

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., October 21, 1929.—The generally satisfactory demand for paper continues in this market in both fine and coarse grades and in specialties. The fall trade is apparently opening well, and prospects that the volume of business will hold at least fairly steady are favorable.

With box makers busy, there has been more buying of boards in the last month or so. In fact, the demand has improved since August 1. Inventories are reported to be low, so that indications point to the placing of a sizable tonnage of orders in the near future. The lighter weights of folding board show a tendency to advance, but this fact does not hold up business. Prices of filled news board and chip board remain at the same levels, although the feeling persists that conditions will compel a rise soon.

There are no unusual features in the paper stock market, with an average volume of orders being received. The low water situation has improved somewhat, so that the mills are in a better position to operate more than they had been for a considerable period. The cotton twine market is becoming stronger. Jute is firm and regular.

Knight, Allen & Clark Progressing

Knight, Allen & Clark, Inc., recently rounded out a decade of business. The firm at first occupied one floor at 179 High street, where it is now located. George D. Allen, Carlton Knight and Nathan S. Clark formed a partnership, but in 1920 became incorporated. At that time, their requirements were such that they took over two floors of the building and also the basement, sub-letting the first floor. In 1926, Mr. Knight died. In the present organization, Mr. Allen is treasurer and vice president and Mr. Clark president and secretary. The firm has had a consistent growth on a sound business basis and has added many lines. The concern is one of the service houses of the American Paper Company, and represents a large number of lines of the Crocker-McElwain Company and the Chemical Paper Manufacturing Company, Holyoke, Mass.

Paper Mills Entertain

The Valley Paper Company, Holyoke, Mass., entertained on October 8 and 9, Milton Broome, assistant purchasing agent, and Charles Lowden, superintendent of the American Printing Company, Fall River, Mass., and Fred Herbolzheimer, of the Globe Paper Company, 10 High street, Boston. The program included a trip through the mills, with explanation of the manufacture of the product, and entertainment by the Valley Paper Company at the Mount Tom Country Club.

Another party of representatives from the Howard Paper Company, Inc., and the Globe Paper Company, Inc., went to Groveton, N. H., October 19, where they were entertained by the Groveton Paper Company. A program similar to that on the occasion of the recent visit of other members of the organizations of the two Boston companies was enacted.

O. M. Porter to Address Paper Merchants

A meeting of the New England Paper Merchants' Association to be held at the Harvard Club of Boston, November 21, will be of special interest to the Coarse Paper Division. O. M. Porter, manager of the Kraft Paper Manufacturers' Association, is to speak on "The Kraft and Paper Industry."

F. W. Main Discusses High Grade Papers

Frederick W. Main, of the Worthy Paper Company, Mittineague, Mass., addressed members of the New England Printing Supply Salesmen's Guild in regard to high grade papers at a dinner of the organization at the Hotel Brunswick, Friday evening. Mr. Main showed some very fine specimens of printing from all over the country, including deluxe work. His talk was highly interesting and well received.

News of the Trade

At a sales meeting at the office of John Carter & Co., Inc., Saturday morning, Henry P. Poter, of the Oxford-Print, Boston, and H. N. Donahue, P. W. Robinson and J. C. Clark, of the McLaurin Jones Company, Brookfield, Mass., manufacturers of gummed paper products, were the principal speakers, discussing the methods of using these papers.

F. T. Burkhardt, of the F. T. Burkhardt mill, Holyoke, Mass., manufacturer of Clydesdale Bond, Ledger and Linen, gave a talk on lines made at his plant at a sales meeting at the office of Carter Rice & Co. Corp. Saturday morning.

Rutter & McNaught, Inc., on account of increasing business, are to remove the latter part of this week from 170 Summer street to offices on the second floor of 185 Summer street, where they will be more centrally located and more accessible. There is also an opportunity for display windows on Dewey Square.

In Carico Flashes, of Carter Rice & Co. Corp., Hubert L. Carter, who recently returned from abroad, describes vividly his climb of the Matterhorn, Switzerland, on which he was accompanied by Mrs. Carter, his daughter, Elfriede, and son, Adams, and guides. He has in his office three photographs showing the contour of the mountain and expects to have the rope used in the climb.

All Eagle-A Service House members have been invited to attend the Second Annual Conference of the Paper Users' Standardization Bureau, to be held at the Hotel Statler tomorrow from 3.30 to 9.30 p. m. Dinner is to be served at six o'clock.

A joint meeting of the Hammermill Agents in Boston, Carter Rice & Co. Corp. and Storrs & Bement Company, is scheduled to be held October 25 at the Chamber of Commerce Building. The meeting will begin with a dinner at 6 p. m., which will be followed by talks given by the various officials of the Hammermill Paper Company. All officials and salesmen of both companies have been invited.

Carter Rice & Co. Corp. points to a recent order for approximately four cases of Crane's Olde Book as an example of what can be done by concentrating on high grade papers.

The Advance Bag and Paper Company has removed its offices from 301 Congress street to 38 Newbury street.

L. B. Tewksbury, vice president of Spaulding & Tewksbury Company box board dealers, has gone on a business trip to New York City and vicinity.

The American Writing Paper Company, Holyoke, Mass., the Strathmore Paper Company, Mittineague, Mass., and the Tileston & Hollingsworth Company, Boston, are among the exhibitors at the Quality Products Exposition of the Associated Industries of Massachusetts to be held at the Copley-Plaza Hotel October 21, 22 and 23.

Tileston & Hollingsworth Company have issued a new sample book of their "Papers of Old-Fashioned Quality," showing 21 lines.

The S. D. Warren Company has declared a third quarterly cash dividend of $1.75 per share on the common capital stock, payable November 15 to shareholders of record at the close of business October 31.

THE BIRD CENTRIFINER

. . . the greatest contribution to the art of making clean paper since the perfection of the Bird Screen

BIRD MACHINERY

Put your stock through Bird Centrifiners* and your paper will be really clean — clean and more perfectly formed.

Modern paper making demands Bird Centrifiners. Write for the whole story today — and hope your competitor puts it off till tomorrow.

*Manufactured under license from the Centrifugal Engineering and Patents Corporation.

BIRD MACHINE COMPANY
SOUTH WALPOLE ★ MASSACHUSETTS

NOW YOU CAN MAKE PAPER THAT IS REALLY CLEAN . . .

USE BIRD CENTRIFINERS

3260

Chicago Paper Market in Fairly Good Shape

Demand for Fine Papers Satisfactory For Time of Year, With Supplies Moving Into Consumption In Seasonal Volume—Mechanical Pulp Market Firmer Than of Late, Due to Prevailing Low Water Conditions—Paper Mills Confronted With Unusual Problem

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., October 21, 1929.—A strong stiffening up in the ground wood market due to low water conditions is the chief topic of interest in the Chicago paper market this week. One of this sections best student of conditions in this industry is frankly stating that things look decidedly serious for the winter months. Especially is the situation unusually difficult in this territory due to the fact that the fall rain storms did not arrive and the usual amount of rainfall was lost. It will be necessary for the mills to carry the price, due to the shortage, say reports, or for the price to go up in ratio to the shortage. The news print market is also said to be feeling the situation heavily. The low price paper mills will be confronted with an unusual problem. Fine papers continue to move along in satisfactory volume with the market steady and dealers reporting a good amount of business. Book and covers remain about the same as last week. The market in general, is characterized as being in fairly good shape.

Paperboard Industries Association Plans

With the Annual Meeting of the Paperboard Industries Association scheduled for November 20 and 21 at the Commodore Hotel, New York, N. Y., the headquarters staff in Chicago is unusually busy making extensive preparations for an event that includes the election of officers for the coming twelve months. The results of the recent September meeting indicate that an unusually able group of men, forming the nominating committee, will be active in the best interests of the association. Members of the presidential nominating committee include A. J. Eggerss and E. T. Gardner from the Folding Box Group; J. P. Brunt and Henry D. Schmidt of Schmidt & Ault Paper Company; Colonel C. W. Gaylord, and F. J. Kress from the Container Group. The nominating committee from the Container Group for the election of the vice president includes E. E. Scharff, H. C. Campbell, W. J. Cassady, I. Etra and Irving Hill. For the Paperboard Group, T. H. Goodspeed, J. J. Brossard, H. C. Campbell, E. R. Hankins and Sidney Frohman and for the Folding Box Group, Irving Randall, J. L. Barchard, E. J. Gereke, W. J. C. Karle and W. H. Richardson.

A committee for making arrangements for an Annual Dinner to be held in conjunction with the annual meeting was appointed by President J. J. Brossard and consists of H. C. Campbell, Robert Gair Company; H. H. Stonebarger, Globe Folding Box Company, and T. C. Mitchell, Federal Container Company.

The Paperboard Industries Association has also recently announced that Hugh Peat, secretary of the Pacific Coast Paper Box Manufacturers Association, San Francisco, has been delegated to act as the representative of the Pacific Coast manufacturers in administering the Trade Practice Rules in that territory.

Objects of Association

In connection with the association the attention of every member of the paper industry might well be called to the report of Hugh Strange, vice president of the Paperboard Group at the most recent meeting of the Association. The report is in answer to criticisms directed against the association and contains the reasons for the existence of the association with principles that should be of merit to any association. The objects of the association are, according to Mr. Strange, to promote the general welfare of the branches of the industry and to encourage and bring about close and more friendly relations, to promote fair trade practices; to promote and develop the market, both domestic and foreign, for paper board and its products; to encourage industrial research to improve and develop manufacturing processes, to encourage arbitration and others. The pamphlet could probably be secured by writing to the Association headquarters in Chicago. It is well worth reading.

News of the Trade

Stock sizes and weights in standard mill grades and sold in original packing only were sent out as of October 15 from the Chicago offices of the West Virginia Pulp and Paper Company in the Pure Oil Building. Prices were quoted on Super White Super-India, Machine Finish White, Eggshell White, White Bond, Blue Bond, Buff Bond, Pink Bond, Canary Bond, Goldenrod Bond, White Writing, Canary Writing, White Mimeograph, Index Bristols and Cream Post Card.

An exceptional broadside is being used by the Bermingham & Prosser Company, 128 South Sangamon street, Chicago, to advertise Oxford Folding Coated, useful for direct mail selling. The Oxford Folding Coated is described as powerful, clean, folds exceptionally well and has an excellent printing surface.

Indianapolis Demand Improves

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., October 21, 1929.—While the improvement in the paper trade has not been what is exactly wanted in this territory, yet there has been some increased activity and the indications point to more. Paper merchants now are rather looking to the printers who generally bid on the thousands of dollars worth of county and state printing work before the end of each year. This work runs into money and the successful printers in the bidding generally seek to protect themselves by contracts for supplies shortly after securing contracts. And most of the paper used is of high quality.

The last two weeks have seen a better demand for news print. Most of the smaller agricultural communities have been holding special fall festivals, the larger cities have been holding fall dollar days and the Indianapolis papers last week benefitted by the holding of the state teachers convention, drawing more than 15,000 teachers. Papers generally have been more voluminous.

Paper stock business is very spotted. Prices generally are very low and the paper stock plants here report an indifferent demand. The bulk of the demand is for better quality of paper stock.

Paper box manufacturers are busy and are buying their requirements. Demand for holiday trade is reported and should be better than last year. The building paper demand is sinking to its usual level for late fall and early winter and nothing much is expected in this line until spring.

D. C. Everest on Wood Utilization Committee

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., October 21, 1929.—D. C. Everest, vice president and general manager of the Marathon Paper Mills Company, Rothschild, Wis., has been named a member of the national committee on wood utilization. His appointment is announced by Secretary of Commerce Lamont. The committee will help perpetuate the forests of the nation through the promotion of efficient wood utilization.

Another reforestation project is in progress to aid Wisconsin's fight to stop the depletion of the timber and pulpwood supply. Property owners in Clark and Jackson counties are arranging to settle up indebtedness of $170,000 drainage projects in that area and then utilize 93,000 acres of land for tree growing. It is believed this will be a means of reclaiming the land as well as providing additional timber.

Save Waste

A good *profit* may be shown on your operation by turning *Waste Fibres* into Insulating Board. Your *product* will make *profit* for your customers by *saving heat* in cars, houses, refrigerators, etc. Conservation is the order of the day. First step—let us make full sized samples from *your own waste*—slabs, edgings, bagasse, cornstalks or "what have you."

DOWNINGTOWN MFG. CO.
DOWNINGTOWN, PA., U. S. A.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Wisconsin Rapids, Wis.—The Consolidated Water Power and Paper Company, Wisconsin Rapids, has secured permission from the Wisconsin State Industrial Commission to make extensions in local mill, including a one-story finishing room and addition to filter plant. Work will be placed under way at an early date. The company has also received authority to install a new filter plant for mill service at Biron, Wis. The program is reported to cost more than $70,000.

Menasha, Wis.—The Central Paper Company, Menasha, has approved plans for construction of new boiler plant at mill, to be one-story, about 30x40 feet and for which general contract has been let to Fluor Brothers Construction Company, 52 Otter street, Oshkosh, Wis. Superstructure will begin at once. Work is reported to cost about $24,000.

York, Pa.—The Barnes Wall Paper Company, West King street, York, has plans under way and will soon take bids for the construction of a new addition to mill, to be one-story, reported to cost about $25,000. H. E. and R. B. Yessler, Schmidt Building, York, are architects. Albert G. Barnes is treasurer.

Nashville, Tenn.—The Nashville Corrugated Box Company, Seventh street, North, has been acquired by the Continental Can Company, 1 Pershing Square, New York, and will operate as a subsidiary organization for the manufacture of corrugated shipping containers for the food product and other affiliated industries. The company has been running a local plant since 1920, and J. D. Goodpasture, heretofore head of the Nashville company, will continue with the plant. The acquiring company has organized a new corporation under the same name with capital of $50,000, to operate the unit. It is understood that plans are being considered for expansion in present output.

Green Bay, Wis.—The Fort Howard Paper Company, has completed foundations and will proceed with superstructure for proposed new addition to mill, and for which a number of miscellaneous contracts are being let. The unit will be three-story, 100x200 feet, and will be used primarily for paper converting service, with portion to be given over to storage and distributing. It will cost about $100,000, with equipment. Contract for general erection was awarded to the Selmer Company, 310 West Walnut street, Green Bay. Award for steel sash has been made to the Truscon Steel Company, Milwaukee, Wis.

Elkton, Md.—The Jessup & Moore Paper Company is planning the early rebuilding of portion of its Radnor pulp mill destroyed by fire, October 13, with loss reported at close to $50,000, including equipment. The fire started in the basement of the chipper house and spread to other buildings. The reconstruction is expected to cost close to the amount of fire loss.

Chicago, Ill.—The Continental-Diamond Fibre Company, Newark, Del., formed by a recent merger of the Continental Fibre Company, Newark, and the Diamond State Fibre Company, Bridgeport, Pa., has concluded negotiations for the purchase of the property of the Piano and Organ Supply Company, 2100-21 North Racine avenue, Chicago, consisting of a tract of more than one acre of land improved with a factory building totaling about 75,000 square feet of floor space. The purchasing company will take over the property at once, and will equip for a new plant unit. It is expected to develop large capacity for fiber containers and kindred products.

Utica, N. Y.—The Wadding Products Corporation, recently organized by local interests, represetned by George Cowell, 138 West 46th street, New York, with capital of 500 shares of stock, no par value, is said to be planning the operation of a local mill for the manufacture of paper and pulp products.

Sandusky, Ohio—The Hinde & Dauch Paper Company, Sandusky, manufacturer of corrugated paper containers, etc., is planning the rebuilding of portion of mill at West Sandusky, known as Plant No. 2, destroyed by fire, October 15, with loss estimated at $25,000, including building and equipment.

Indianapolis, Ind.—The United States Corrugated Fibre Box Company, 1315 Martindale avenue, is continuing its expansion program, and following recent award for a two-story and basement manufacturing unit to cost about $200,000, with machinery, has completed plans for another structure, consisting of a one-story building for storage and distributing service, to be located at Martindale and Roosevelt avenues, and for which general contract has been let to the Hall Construction Company, Board of Trade Building, Indianapolis. It will cost approximately $65,000, with equipment. Charles E. Bacon, Odd Fellows Building, is architect. H. J. Lacey is president.

Elkhart, Ind.—The American Coating Mills, Inc., have work under way on a new addition to mill on Division street, to be one-story, estimated to cost about $30,000. It is expected to have the unit ready for occupancy at an early date.

Marrero, La.—The Celotex Company, Chicago, Ill., is running on a capacity basis at its local board mill for the production of insulating board products, and is exceeding output of a year ago by more than 7,000,000 square feet a month, the shipments up to the present time this year totaling more than 47 per cent of those for the same period in 1928. A full working force is being maintained. The present schedule will be continued for an indefinite period. The company also has work under way on a new mill in Louisiana.

Detroit, Mich.—The Saint Clair Paper Mills, Inc., recently formed with a capital of 400,000 shares of stock, no par value, by Clarence E. Bradford, 2947 West Grand Boulevard, Detroit, and associates, is said to be planning the early operation of a paper mill in this vicinity. J. G. Fox, Kalamazoo, Mich., is interested in the new organization.

Easton, Pa.—The Individual Drinking Cup Company, Easton, is said to have plans for further expansion in its plant for the manufacture of paper drinking cups and kindred products, and for which contract will be awarded at an early date. The company recently approved the erection of a three-story addition, 80x100 feet, to cost close to $100,000, with equipment. Large increase in capacity will be developed. The Ballinger Company, Twelfth and Chestnut streets, Philadelphia, Pa., is architect for both extensions.

Minneapolis, Minn.—An affiliation of paper and pulp interests in this section, including the Backus-Brooks Company, Builders' Exchange Building, Minneapolis; Minnesota & Ontario Paper

The adjustment is built into the blade of a VICKERY DOCTOR

Look, there's nothing to play with on this blade. You install a Vickery Doctor and then forget it. No filing, no bending, no tricky adjustments.

On wide rolls or narrow, cold or hot, dry or wet, the Vickery Doctor blade hugs the surface, adjusts itself. It's full-automatic, even on soft fibre super-calender rolls.

May we show you, with a trial installation at our expense?

BIRD MACHINE COMPANY

SOUTH WALPOLE •• MASSACHUSETTS

3349

Company and Insulate Company, both of International Falls, Minn., and identified with the Backus-Brooks Company, and the National Pole and Treating Company, Minneapolis, are said to be perfecting plans for the establishment of a new plant in the vicinity of Helsingfors, Finland, for the manufacture of insulating board prodcts, utilizing local raw material. It is understood that a site has been selected and that plans will be drawn at an early date for several mill units, with power house, machine shop and auxiliary structures, entire project to cost upward of $3,000,000, with machinery. E. W. Backus is president of the different companies noted.

Berlin, N. H.—The International Paper Company sustained a loss by fire at its local mill No. 4, on October 8, with loss on machinery reported at close to $16,000. The damage will be replaced. Headquarters of the company are at 100 East Forty-second street, New York.

Hull, Que.—The E. B. Eddy Company, Ltd., has plans under way for the construction of a new paper mill at its local properties, consisting of group of buildings reported to cost close to $1,200,000, with machinery. Surveys will be placed in progress at once, and work on supertsructure started. It is understood that the new plant unit will be given over to the production of manila papers, wrapping stocks, tissue, etc. List of machiney will be arranged at an early date. George H. Millen is president and general manager.

New Companies, Etc.

Detroit, Mich.—The Michigan Fibre Company, 1477 Woodlawn street, Detroit, has been incorporated with a capital of $20,000, to manufacture fiber and kindred products. The incorporators are: Abraham Grossman, George L. Sparberg and Julius Rotenberg, Detroit. Last noted will act as representative.

St. Petersburg, Fla.—The Bush Paper and Supply Company, Inc., has been organized to manufacture and deal in paper products. The company is headed by Clarence N. Bacon, and Edward D. Bush, First avenue and 53rd street, St. Petersburgh. Last noted is representative.

New York, N. Y.—Interstate Paper Corporation, has been incorporated with a capital of 200 shares of stock, no par value, to manufacture and deal in paper products. The incorporators are: Rex F. Gilmartin and Joseph C. Jaffe. The company is represented by Jacob Chaitkin, 100 East 42nd street, New York, attorney.

Chicago, Ill.—The Great Western Fibre Manufacturing Company, 1226 Blue Island avenue, has been incorporated with a capital of 100 shares of stock, no par value, to manufacture and deal in fiber products. The incorporators are: G. Winsberg and M. M. Hein.

Springfield, Mass.—The New York Wall Paper Company, Inc., has been incorporated with a capital of $50,000, to manufacture and deal in wall paper stocks. Charles R. Groton is president; and Charles A. Clarke, 6 Fairfax street, Utica, N. Y., is treasurer and representative.

Stream Purification In Wisconsin

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., October 21, 1929.—Although the problem of stream pollution in Wisconsin, especially with regard to waste from paper mills and other industries, has not been solved, progress has been made in this direction. The mills are working in co-operation with a state committee on water pollution and hope to arrive at a condition which will eliminate these conditions almost entirely. During the last year, much of the time of the committee has been devoted to surveys to determine all the factors involved. There have been 579 investigations. It is found that legal, scientific and economic obstacles appear to an extent that makes the remedy difficult. From now on various reports will be studied and some recommendations are expected for improvement of the situation. The state committee has power to issue orders on the subject, but is showing a preference for investigations, inasmuch as the paper mills and others have offered their assistance and financial aid as well for research work.

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition has filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trademark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

SAVADAY—No. 270,429. Keyes Fibre Company, Inc., Waterville, Me. For plates, dishes and rolls, packages, or cartons for said plates and dishes.

AJAX—No. 280,362. United States Envelope Company, Springfield, Mass. For paper cups.

BATES—No. 282,516. Bates Valve Bag Corporation, Chicago, Ill. For paper bags.

DIAPEX—No. 286,685. The Diapex Corporation, New York City. For sanitary paper diapers.

PLASTO-ART—No. 287,594. The Prager Company, Inc., Brooklyn, N. Y. For wall paper.

EBONITE—No. 279,129. Avery Corporation Chicago, Ill. For fiber board, Card.

CLOUDTONE—No. 179,140. The Beveridge Paper Company, Indianapolis, Ind. For card board, bristol board, paper calendar back, cover paper, and photo mounts.

SANALAC—No. 187,593. The Prager Company, Inc., Brooklyn, N. Y. For wall paper.

NEWS-O-GRAM—No. 287,617. Lee Rogers Company, Chicago. For blank forms sold to the trade as such.

THRIFT-O-GRAM—No. 287,619. Lee Rogers Company, Chicago. For blank forms sold to the trade as such.

BATES—No. 282,513. Bates Valve Bag Corporation, Chicago. For paper bags.

DAMON—No. 287,372. Seaman Paper Company, Chicago. For rotogravure papers, printing, writing, book, and cover papers.

LINTEX—No. 287,496. Regal Paper Company, Inc., Pulaski, N. Y. For toilet paper and white crepe napkins.

Z (with the picture of a crown)—No. 284,446. Crown Zellerbach Corporation, San Francisco, Cal. For paper towels.

CARIEBEAN—No. 286,263. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

GULF COAST—No. 286,264. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

STRONGHEART—No. 286,269. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

SUNKIST—No. 286,270. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

WALDO HILLS—No. 286,271. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

ZERO—No. 286,272. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

PARCHWAX—No. 286,810. Wax Paper Products Company, Omaha, Neb. For wrapping paper.

WAXPAX—No. 287,575. Economy Paper Company, Milwaukee, Wis. For waxed paper.

GENERAL UTILITY—No. 285,961. Carew Manufacturing Company, South Hadley Falls, Mass. For writing and printing paper.

PADLOCK SAFETY PAPER—No. 286,190. The Perfect Safety Paper Company, Holyoke, Mass. For printing and writing paper.

A & P—No. 286,260. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

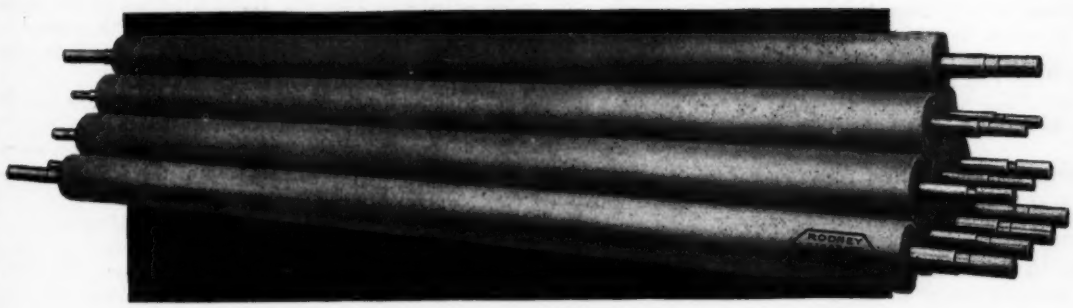
ANTIPODES—No. 286,261. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

CALORE—No. 286,262. Oregon Pulp and Paper Company, Salem, Ore. For bond paper.

SUNSET TINTED BRISTOL—No. 287,364. Seaman Paper Company, Chicago. For cardboards, Bristol boards and index Bristols.

IVANHOE TEXT—No. 287,370. Seaman Paper Company, Chicago. For rotogravure papers, printing, writing, book and cover papers.

CONTELOR—No. 287,374. Societe Anonyme Crayons Conte, Regny,



"Shaf-tite" Rubber Rolls
TRADE MARK

"Shaf-tite" Brass Rolls
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"Shaf-tite" Wood Rolls
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"Shaf-tite" Pipe Rolls
TRADE MARK

Better Rolls at Lower Service Cost

The "Shaf-tite" Line of Rolls is complete—Wood, Metal and Rubber Rolls. In all of them the shaft setting and the shaft itself are tremendously strong, and the shaft setting is the heart of any roll.

Many mills ask for our roll recommendations when they are building new or overhauling old machines. May we serve you also?

RODNEY HUNT MACHINE CO.
63 Maple St., Orange, Mass., U. S. A.
NEW YORK, PHILADELPHIA AND CHICAGO, U. S. A.; HAMILTON AND MONTREAL, CANADA

RODNEY HUNT
Founded 1840

New York Trade Jottings

Robert H. Scanlon, assistant resident manager of the Powell River Company, Ltd., British Columbia, who is making an extended eastern trip, was a New York visitor last week.

* * *

R. L. Weldon, mill manager of the Corner Brook plant of the International Power and Paper Company, of Newfoundland, is visiting New York this week.

* * *

The Derrico Company of New York City has been incorporated under the laws of New York State to deal in paper stock, with a capitalization of $50,000.

* * *

Frederick M. Feiker, managing director of Associated Business Papers, is scheduled to give an address on "Census of Distribution" at the next weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, which will be held at the Canadian Club next Monday, October 28.

* * *

Professor Hugh Agnew, chairman of the Marketing Division of New York University, was the principal speaker at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Inndustry, held at the Belmont Hotel last Monday. The subject was "Recent Trends in Marketing."

* * *

The recently organized New York Burlap and Jute Exchange inaugurated its activities on Wednesday, October 16, when futures trading was commenced in burlap and sugar bags at 80 Wall street, where the exchange has fitted out offices. Burlap and bags are the only commodities at present traded in, but it is expected that jute, hemp, and possibly kapok will be listed in the near future.

* * *

Johns-Manville Corporation and subsidiaries report for quarter ended September 30, 1929, net profit of $2,483,300 after expenses, federal taxes, etc., equivalent after dividend requirements on 7 per cent preferred stock, to $3.14 a share on 750,000 no-par shares of common stock. This compares with $1,933,007 or $2.40 a share in preceding quarter, and $1,733,451 or $2.12 a share in third quarter of 1928. Net profit for first nine months of 1929, totaled $5,522,396 after above charges, equal to $6.84 a share on common, comparing with $4,095,595 or $4.93 a share in first nine months of previous year.

* * *

The United States Customs Court has just ruled that printed forms of coupon bonds, with a statement on the face thereof that "This bond shall not be obligatory or valid for any purpose until authenticated by the execution by the National City Bank of New York, as trustee, of the certificate indorsed thereon," and imported without such certification, are not negotiable instruments, as alleged by the plaintiffs, F. W. Myers & Co. These articles, Chief Justice Fischer writes, are merely printed forms and having been produced by an engraving process are properly dutiable at the rate of 25 per cent ad valorem, under Paragraph 1310, Tariff Act of 1922, as engravings, as classified by the collector.

To Appeal Glassine Decision

WASHINGTON, D C., October 23, 1929.—F. X. A. Eble, Commissioner of Customs, has requested the Assistant Attorney General at New York to file appeal in the United States Court of Customs and Patent Appeals from a decision of the Customs Court in which it was held that merchandise invoiced as Wattoline-Glassine Backed, upon which duty was assessed at a rate of 6 cents per pound and 15 per cent ad valorem under paragraph 1304 of the tariff act of 1922, was properly dutiable as a manufacture of paper not specially provided for at the rate of 35 per cent under paragraph 1313 of the same act.

B. L. Wehmhoff To Be Technical Director

Public Printer Carter has announced the appointment of Byron L. Wehmhoff of Tacoma, Wash., as Technical Director in charge of the Division of Tests and Technical Control of the Government Printing Office to succeed Edward O. Reed, who resigned October 15 to become Technical Director of the Crane Paper Mills at Dalton, Mass.

Mr. Wehmhoff entered the service of the Government Printing Office as an associate chemist February 16, 1925, and on June 1, 1928, was promoted to assistant technical director, from which position he has now advanced to the head of the Technical Division in the Government Printing Office.

Prior to coming to Washington, Mr. Wehmhoff was employed for three years in the Chemical Warfare Service at Edgewood Arsenal. He is a chemical engineer and graduate of the University of Washington, and has had considerable experience in chemical laboratories in Washington, New Jersey, and Tennessee. Earlier in life he was employed in newspaper offices in Idaho and Washington, where he began his work with type metals and other technical problems relating to printing. Mr. Wehmhoff and his family reside at 7 Woodlawn avenue, Takoma Park, Md.

The officials of the Government Printing Office tendered Mr. Reed a farewell reception when he was presented with a handsome onyx ink stand as a token of their high regard for him. In commenting on Mr. Reed's services, Public Printer Carter stated:

"In thus ending our official relations, I want to thank you again, as I have often done in the past, for the splendid and whole-hearted assistance you have given in the organization and development of the Technical Division of this office. As you know, that division has become one of the most important undertakings of this great establishment, and its work has been highly commended both at home and abroad as an outstanding contribution to the printing industry. Your unselfish devotion to the undertaking has insured its success, and I am gratified to know that you have also trained an organization that is capable of carrying on the work with credit to you and to this office."

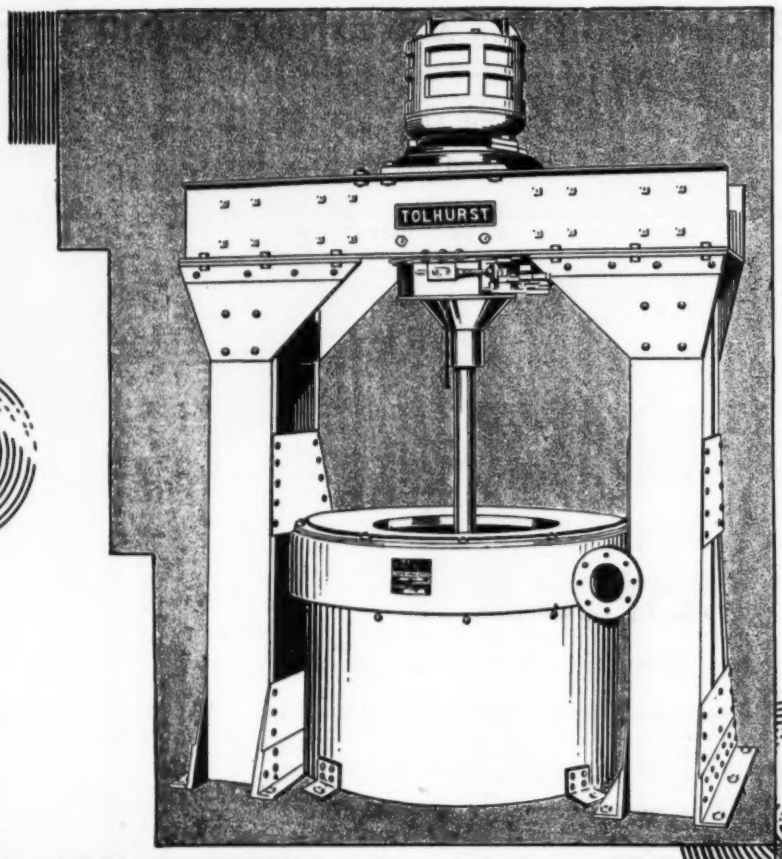
Public Printer Carter states that the staff of the Division of Tests and Technical Control will remain substantially as heretofore with the exception of Mr. Reed, who has been succeeded by Mr. Wehmhoff as Technical Director. For the present, the position of assistant technical director will not be filled.

New York Superintendents Meet

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., October 21, 1929.—At the annual fall meeting of the Northern New York branch of the American Pulp and Paper Mill Superintendents' Association held here during the past week John Broughan, of Utica, was chosen chairman of the organization for the next year. Other officers elected were M. J. Argy, Niagara Falls, first vice chairman; A. W. Bronk, Herrings, second vice chairman; A. G. Wightman, Watertown, third vice chairman, and David Kelly, of Newark, secretary and treasurer.

About 100 members attended the all day session including the election of officers which was followed by an elaborate banquet in the evening. At the opening session an illustrated lecture was produced depicting the age of speed by the Norton Company, of Worcester. An article was also presented by D. L. Bellingers, of Glens Falls, who discussed the Glens Falls rolling machine screens. The afternoon session was featured by the presentation of an article on "The Manufacture of Fourdrinier Wires," by R. M. Watts, of Springfield, and a lecture on "The Fastest Machine of the Day," by Harold Bing, of the Paper and Textile Machinery Company, of Sandusky, Ohio. At the banquet the principal speaker was Dr. J. E. Campbell, president and treasurer of the Dexter Sulphite Pulp and Paper Company, who gave an interesting address on mill efficiency and a closer relationship between operating and technical departments.



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CLEAN

—complete removal of all foreign substance—no grit, no metal, no rubber, no cork—paper stuff purified and brushed out to form the ultimate in strong, truly cleaned paper.

This, in substance, is what the Tolhurst Centrifugal stuff purifier offers the industry. At one fell stroke, rifflers and sandtraps with their attendant inefficiencies are eliminated and new standards of paper-making are attained.

For the complete story of this revolutionary development, write for Bulletin today.

This machine is made under license of the Centrifugal Engineering and Patents Corporation, holders of the Erkensator Patents.

TOLHURST MACHINE WORKS, INC.

TROY, N.Y.

New York Office: **30 Church St.**
Chicago Office: **8 So. Dearborn St.**

CLEAN PAPER

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending August 31, and for the Eight Months Ending August 31, 1929 as Compared with Corresponding Month of Previous Year

IMPORTS—PAPER

	August				Eight Months Ending August 31			
	1928		1929		1928		1929	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper and Manufactures	.....	$12,933,650	.....	$13,985,751	.....	101,518,008	.....	105,443,734
Printing paper—								
Standard newsprint ....lbs...free	347,743,493	11,416,787	419,801,910	12,322,586	2,765,428,087	90,220,497	3,104,226,641	93,131,571
Imported from—								
Finland ....lbs.	6,544,401	165,336	6,009,486	136,387	47,808,082	1,252,544	43,329,256	1,035,079
Germany ....lbs.	1,978,520	53,285	1,202,928	30,270	11,868,238	324,317	13,039,083	321,646
Norway ....lbs.	1,098,085	27,646	95,875	2,642	11,072,829	285,485	4,655,494	116,489
Sweden ....lbs.	8,863,793	234,325	7,601,416	194,116	67,653,942	1,811,510	67,351,700	1,714,713
Canada ....lbs.	315,795,977	10,426,008	357,286,475	10,626,093	2,522,244,581	83,175,666	2,810,343,087	85,319,312
Newfoundland and Labrador ....lbs.	13,437,716	509,425	47,571,782	1,332,135	104,091,913	3,350,936	165,261,273	4,619,037
Other countries ....lbs.	25,001	762	33,948	943	688,502	20,039	246,748	5,295
All other n. e. s. ....lbs...dut.	436,453	19,239	182,320	10,481	5,109,589	237,308	2,822,996	136,501
Grease-proof and water-proof papers ...lbs...dut.	104,800	21,294	246,458	79,567	799,091	150,059	1,159,585	279,705
Kraft wrapping paper ....lbs...dut.	1,825,447	78,046	833,839	35,497	5,844,267	249,359	6,567,719	284,416
Other wrapping paper ....lbs...dut.	1,505,357	48,998	578,407	29,257	11,828,221	270,763	4,788,043	144,554
Writing, letter, drawing, etc., papers ..lbs...dut.	298,960	77,837	276,983	80,549	2,013,240	512,784	2,095,853	547,268
Surface-coated paper ....lbs...dut.	235,344	101,238	145,998	69,114	1,554,598	736,458	1,681,076	711,895
Tissue, copying, etc., papers ....lbs...dut.	284,881	141,776	480,716	256,280	2,062,080	1,265,632	3,138,572	1,670,749
Paper boards, n. e. s.—								
Pulp boards in rolls ....lbs...dut.	3,689,669	76,780	4,050,542	84,254	35,557,982	781,417	39,944,710	869,247
Paper boards, pulp board, and card-board ....lbs...dut.	2,080,528	48,619	1,575,221	50,007	14,826,605	327,409	14,944,944	354,677
Leather board, test, and wall board..lbs...dut.	33,994	1,295	127,598	4,504	590,940	16,801	1,218,439	48,085
Cigarette paper, cigarette books, and covers ....lbs...dut.	1,178,712	315,183	1,099,364	356,757	8,016,820	2,169,440	7,874,511	2,607,047
Hanging paper, (wall paper) ....lbs...dut.	86,994	42,586	91,369	32,214	1,456,510	455,826	1,697,508	471,235
Duplex decalcomania paper, not printed..lbs...free	32,341	7,396	.....	.....	474,639	105,806	417,668	105,509
Paper boxes ....dut.	.....	171,258	.....	155,842	.....	1,219,020	.....	1,151,345
Pulp or papier-mâché and manufactures, n. e. s. ....dut.	.....	32,220	.....	55,689	.....	292,312	.....	399,409
All other paper and manufactures ....dut.	.....	333,098	.....	363,153	.....	2,507,117	.....	2,530,521

WOOD PULP

Mechanically ground wood pulp ....tons...free	15,387	374,476	22,081	543,973	139,789	3,413,817	150,327	3,798,804
Sulphite wood pulp ....tons	79,074	4,736,467	92,981	5,458,963	598,096	35,202,565	688,851	40,404,628
Unbleached ....tons..free	51,708	2,634,098	63,084	3,214,795	400,984	20,289,416	463,114	23,308,815
Bleached ....tons..free	27,366	2,102,369	29,897	2,244,168	197,112	14,913,149	225,737	17,095,813
Imported from—								
Finland ....tons	8,361	366,375	11,444	576,566	64,202	2,773,569	77,016	3,722,259
Germany ....tons	6,313	425,310	5,260	358,014	40,921	2,686,781	43,698	3,028,355
Norway ....tons	3,562	260,153	7,654	533,870	40,337	2,721,672	42,789	2,921,110
Sweden ....tons	29,119	1,602,912	33,729	1,883,265	190,254	10,409,539	264,472	14,601,851
Canada ....tons	30,138	1,996,857	33,499	2,033,721	237,784	15,237,148	246,582	15,357,500
Other countries ....tons	1,581	84,860	1,395	73,527	24,598	1,373,856	14,294	773,553
Sulphate wood pulp, unbleached, (kraft pulp) ....tons..free	37,114	2,056,801	32,554	1,720,894	220,362	12,356,458	238,955	12,937,571
Imported from—								
Finland ....tons	2,242	109,291	3,791	185,389	19,028	840,109	17,738	844,639
Norway ....tons	633	32,659	1,999	99,164	8,710	456,457	10,621	564,523
Sweden ....tons	21,864	1,155,520	16,792	826,589	98,235	5,159,775	131,597	6,693,779
Canada ....tons	12,275	754,757	9,600	593,056	91 850	5,786,923	73,758	4,592,900
Other countries ....tons	100	4,574	372	16,687	2,539	113,194	5,241	241,730
Sulphate wood pulp, bleached ....tons..free	683	37,914	1,302	94,472	7,444	448,571	11,229	830,996
Other pulp ....tons..free	846	60,797	397	29,087	4,009	277,369	6,005	371,823

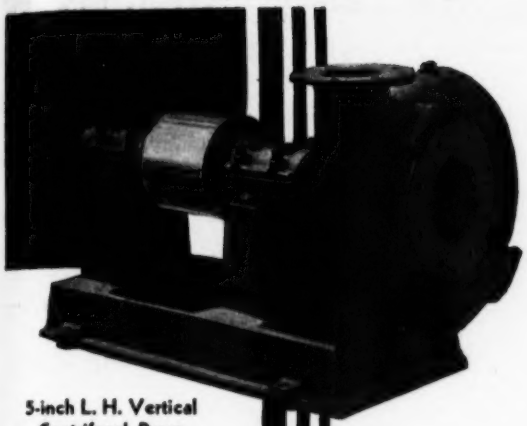
CRUDE PAPER STOCK

Rags for paper stock ....lbs...free	43,841,140	772,822	38,296,205	856,450	293,393,885	5,374,783	291,413,266	5,987,084
Waste bagging, waste paper, etc. ....lbs...free	13,358,925	158,708	12,028,053	138,977	101,210,740	1,377,537	99,022,258	1,198,140
Old rope and all other paper stock ....lbs...free	5,737,468	194,025	10,067,878	333,720	41,453,068	1,229,407	77,907,912	2,433,463

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

Colors, dyes, stains, color acids, and color bases, n. e. s. ....lbs...dut.	473,599	553,614	441,166	497,997	4,044,907	4,416,747	5,192,529	5,835,742
Imported from—								
Belgium ....lbs.	11,305	17,213	4,712	4,799	88,549	100,854	40,813	51,745
France ....lbs.	4,328	4,976	14,391	35,375	50,311	62,527	98,227	148,607
Germany ....lbs.	283,507	305,447	252,397	250,389	2,638,886	2,721,592	3,481,242	3,821,403
Italy ....lbs.	2,750	3,832	.....	.....	48,991	46,736	8,228	7,074
Switzerland ....lbs.	165,572	214,661	164,083	200,753	1,038,240	1,276,821	1,465,677	1,696,835
United Kingdom ....lbs.	1,780	1,810	980	1,281	74,149	66,978	55,966	62,100
Other countries ....lbs.	4,357	5,675	4,603	5,400	105,781	141,239	42,376	47,978
Casein or lactarene ....lbs...dut.	3,252,672	385,157	1,267,298	151,644	21,591,640	2,797,881	20,702,099	2,476,423
Kaolin, china, and paper clay ....tons..dut.	15,188	160,302	25,277	271,481	177,484	1,858,347	179,115	1,946,460

(Continued on page 40)



5-inch L. H. Vertical Centrifugal Pump

Pumps for handling

Pulp and other heavy substances, especially for Paper and Pulp Mill Requirements

During the last 45 years The Moore & White Co. has built pumps for all purposes, and are fully acquainted with the practical requirements, especially for Pulp and Paper Mills. The standard Centrifugal Pump as shown by the illustration, is designed for raising stock or water containing solid matter; the discharge is continuous and steady. Pump can be changed to either hand in a few minutes. The mechanical construction is of the best. It is built very strong and rugged, and all parts are accurately machine fitted. The shaft is of large diameter, running in long ring oiling bearings lined with the best grade of babbitt. Large stuffing boxes are used and can be easily packed. We carry a complete line of Centrifugal, Stuff and Suction Pumps, and are prepared to make shipment upon receipt of order. Inquiries solicited and given prompt and careful attention.

STUFF
SUCTION
CENTRIFUGAL

PUMP BULLETINS SENT UPON REQUEST

THE MOORE & WHITE CO., NORTH PHILA. STATION PHILADELPHIA, PA.

PAPER · MACHINE · BUILDERS

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 38)

EXPORTS—PAPER

	August 1928 Quantity	August 1928 Value	August 1929 Quantity	August 1929 Value	Eight Months Ending August 31 1928 Quantity	Eight Months Ending August 31 1928 Value	Eight Months Ending August 31 1929 Quantity	Eight Months Ending August 31 1929 Value
Paper and Manufactures	.....	2,748,111	.....	3,088,478	.....	20,543,169	.....	25,128,434
Printing paper—								
Newsprint paper ....lbs.	1,919,680	73,707	2,156,617	81,752	14,785,971	565,120	21,925,637	830,031
Exported to—								
Canada ....lbs.	.....	.....	5,770	330	134,798	4,839	461,483	21,483
Central America ....lbs.	86,477	2,783	93,308	3,581	732,630	25,764	894,734	32,180
Cuba ....lbs.	338,842	13,290	279,359	10,359	2,898,591	107,016	2,170,585	80,031
South America ....lbs.	463,368	18,168	1,005,707	36,637	3,818,616	143,017	6,146,568	228,126
China, Hong Kong, and Kwantung ...lbs.	413,010	15,473	54,024	2,756	1,201,475	46,106	3,720,204	126,653
Philippine Islands ....lbs.	534,588	20,675	506,313	16,606	5,272,792	210,396	6,365,373	226,304
Other countries ....lbs.	83,395	3,318	212,136	11,483	727,069	27,982	2,166,690	115,254
Book paper, not coated ....lbs.	1,874,522	145,449	3,159,680	219,296	16,177,665	1,196,922	25,485,215	1,801,550
Exported to—								
Europe ....lbs.	50,173	6,120	146,654	21,842	376,277	38,389	1,303,445	116,875
Canada ....lbs.	731,923	44,233	952,309	53,897	6,410,261	382,943	8,083,362	486,567
Mexico ....lbs.	20,353	2,155	48,130	4,161	324,010	39,305	393,158	39,675
Cuba ....lbs.	384,246	30,027	578,490	37,479	3,279,590	242,200	3,433,739	242,408
Argentina ....lbs.	56,984	5,535	30,404	2,757	447,120	42,055	1,453,656	114,884
Other South America ....lbs.	78,731	8,214	62,200	5,137	819,345	70,985	944,165	78,414
China, Hong Kong, and Kwantung ...lbs.	61,366	10,047	747,247	44,834	1,191,465	106,457	4,901,716	295,897
Philippine Islands ....lbs.	240,254	15,327	338,067	22,088	1,540,324	104,389	2,955,678	202,870
Australia ....lbs.	84,516	10,814	82,177	13,855	690,003	70,680	908,541	129,650
Other countries ....lbs.	165,974	12,977	174,002	13,246	1,189,270	99,519	1,107,755	94,310
Cover paper ....lbs.	159,476	25,956	163,147	29,624	1,415,953	234,209	1,341,678	231,997
Grease-proof and water-proof paper ....lbs.	189,011	35,031	270,923	53,011	2,143,395	319,209	1,960,637	363,066
Overissue newspapers ....lbs.	.....	.....	11,179,847	121,364	.....	.....	98,169,341	1,092,350
Wrapping paper ....lbs.	2,826,538	196,603	3,260,825	216,938	23,711,768	1,710,813	28,127,833	1,940,348
Surface-coated paper ....lbs.	1,250,778	118,071	745,213	80,296	6,454,743	712,214	11,179,699	1,031,971
Tissue and crêpe paper ....lbs.	449,237	109,035	501,306	114,653	3,637,637	777,060	3,066,432	687,831
Toilet paper ....lbs.	701,043	72,708	355,436	41,347	4,144,163	451,904	4,702,076	530,986
Paper towels and napkins ....lbs.	377,455	46,905	284,033	38,818	1,979,116	252,815	2,258,552	280,273
Box board ....lbs.	3,320,900	90,762	4,609,496	318,916	33,251,659	943,851	37,682,774	1,197,229
Bristols and bristol board ....lbs.	225,968	24,158	196,077	19,672	1,328,228	146,364	1,976,617	190,864
Other paper board and strawboard ....lbs.	5,560,518	391,473	4,109,456	178,701	28,744,273	1,539,445	28,641,353	1,344,224
Sheathing and building paper ....lbs.	1,074,220	42,611	2,160,695	63,127	8,887,282	335,291	16,026,905	539,605
Fiber insulating lath or board ....sq. ft.	.....	.....	4,208,113	140,559	.....	.....	17,468,523	582,391
Wall board of paper or pulp ....sq. ft.	5,503,021	186,054	5,330,393	173,774	35,924,707	1,208,580	44,639,930	1,447,724
Blotting paper ....lbs.	301,262	35,689	256,327	33,722	2,711,685	309,251	2,468,350	293,290
Filing folders, index cards, and other office forms ....lbs.	149,647	44,764	103,718	40,657	1,045,771	350,790	1,052,795	392,677
Papeteries, (fancy writing paper) ....lbs.	69,537	21,286	96,342	26,072	487,432	118,575	467,205	126,239
Other writing paper ....lbs.	1,938,164	203,300	2,134,258	222,882	15,751,489	1,807,063	19,266,100	2,033,102
Paper hangings, (wall paper) ....yds.	2,731,825	58,666	883,427	23,025	24,904,546	476,544	20,770,322	451,394
Paper bags ....lbs.	633,099	54,587	916,633	74,411	5,847,250	523,229	7,915,660	671,909
Boxes and cartons ....lbs.	2,285,953	165,417	2,238,080	160,669	17,430,964	1,175,232	20,231,083	1,316,137
Envelopes ....lbs.	241,010	32,785	177,570	33,116	1,675,388	272,423	1,628,192	284,111
Vulcanized fiber sheets, strips, rods, and tubes..lbs.	531,960	147,455	506,190	117,720	3,784,223	1,010,097	4,238,011	1,038,899
Manufactures of vulcanized and indurated fiber..lbs.	49,779	10,215	7,540	3,279	395,085	111,796	326,632	77,601
Cash-register and adding-machine paper ....lbs.	462,682	48,118	188,605	22,223	2,092,987	222,332	3,022,591	306,562
Other paper and paper products	.....	367,306	.....	438,854	.....	3,772,040	.....	4,044,073
WOOD PULP AND PAPER STOCK								
Sulphite wood pulp ....tons	1,603	84,967	2,906	176,968	13,694	772,592	29,203	1,550,439
Soda wood pulp ....tons	245	20,000	178	15,205	1,477	117,318	1,221	98,856
Other wood pulp ....tons	576	36,798	588	42,465	2,319	138,884	4,838	334,590
Rags and other paper stock ....lbs.	18,644,876	268,727	11,279,810	159,544	159,635,160	3,056,433	78,144,298	1,401,888
PAPER AND PULP MILL MACHINERY								
Paper and pulp mill machinery	.....	155,469	.....	645,600	.....	2,086,553	.....	2,547,303

Adhesives

DIE KLEBSTOFFE. KLEBE- UND STREICHMITTEL FUR DIE PAPIER UND PAPPER VERARBEITENDEN INDUSTRIEN. Ein Handbuch für die Praxis. K. G. Junge. 3rd Edition. Berlin, Verlag Carl Hoffman GmbH., 1929. 169 pages. Price 6 RM.

The second edition of this book appeared in 1921. The third edition has been rewritten and considerably enlarged. After a brief history of adhesives, there is a discussion of the various products used: Starch, dextrins, gum arabic, animal glue, fish glue, cold glue and casein. Special attention being given to animal glue (its preparation, properties, uses and testing being discussed). Then follows a discussion of the use of adhesives and of machines for the application of adhesives. Finally there is a discussion of adhesives for papers of different kinds, for gelatin, cellophane, celluloid, etc., for glasses, porcelains, stone wares, etc., and for metals. Formulas are given for the preparation of adhesives suitable for glazed papers, chromo papers, silk papers, cork paper, envelopes, paraffined papers, parchments and pergamyns, varnished papers, photographic papers, wall papers, etc.

This book should prove of considerable value to all who are interested in adhesives and should help in solving problems which may arise in their application.—C. J. WEST.

Charles Frye To Be Chief Cost Accountant

[FROM OUR REGULAR CORRESPONDENT]

BROWNVILLE, N. Y., October 21, 1929.—Word has reached here of the promotion of Charles Frye, formerly of this place, to the position as chief cost accountant with the St. Lawrence Paper Mill Company, Ltd., of Three Rivers, Quebec. He received his early training in paper mills of this vicinity and the announcement of his promotion was pleasing to his many friends. The St. Lawrence Paper Mills Co. is one of the largest news print mills in the world, employing several hundred.

To Continue Production Control of Pulp

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 23, 1929.—Representatives of the mechanical pulp producers of Norway, Sweden and Finland, met in Oslo recently, as the result of which an official announcement was made to the effect that the production control will be continued during 1930. The natural result of this policy should be a strengthening price tendency, according to Commercial Attache Lund, at Oslo. Mechanical pulp has been sold at prices that have at times dropped to ruinous levels.

BETTER PAPER calls for IMPROVED METHODS —AND— EQUIPMENT

Better Paper is the result of operating the Voith Inlet while cutting operating expense.

Other Valley Equipment

- Jordan Engines
- Beaters, Breakers, Bleachers & Washers
- Flat and Rotary Screens
- Screw Presses
- Voith High Pressure Stock Inlets
- Centrifugal and Stuff Pumps
- Laboratory Equipment
- Stock Valves—Gate and Plug
- Stock Consistency Regulator
- Special Machinery

THE Paper Industry is in a stage of evolution. Machinery and methods are constantly being improved where better results are being shown.

The Voith Stock Inlet is playing an important part in this evolution. There were old fashioned slices before the Voith was introduced, but they were not capable of producing the results desired. There are more inlets, now since the Voith has been in service, but *there are none of them approaching the Voith for operation results, and none of them can deckle in while the machine is running.*

The Voith Stock Inlet is demonstrating its outstanding superiority abroad as well as in 275 installations among 125 mills in the United States and Canada.

New paper machines now include an inlet as part of the machine. Do you have a Voith Inlet on your present machine?

Further information will be furnished by writing the Valley Iron Works Company, Appleton, Wisconsin.

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Equipment for Paper and Pulp Mills

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Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Associate Editor

Thomas J. Burke, C. A.
Editor Cost Section

Reginald Trautschold, M. E.
Power Engineering Consultant

Member A. B. C. Audit Bureau of Circulations

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FOREIGN PAPER TRADE

Exports of paper and paper products from the United States during August were valued at $3,088,478, while those for the previous month were valued at $3,147,717 and for the corresponding month a year ago $2,748,111, according to the Paper Division of the Department of Commerce.

Shipments of book paper and wrapping paper declined to some extent in comparison with July, but show a considerable increase over August, 1928. Exports of news print for August were about 1,079 short tons as compared with 1,369 tons for July, and 960 tons in August, 1928. Bristol and bristol board, and other paper board and straw board show a slight gain over July, but decreased somewhat in comparison with August, 1928. Fiber insulating lath or board exports increased from about 956 short tons in July to 2,104 tons in August. Wall board exports for August were 2,665 tons, showing a decline of 612 tons under July, and 86 tons under August, 1928.

Box board shipments decreased somewhat in comparison with both the previous month and the corresponding month of last year. Exports of papeteries show considerable increase over July, also August, 1928; other writing paper shipments decreased to some extent compared with July, but show a substantial increase over the same month last year, envelopes showing a decrease under both periods. Paper bag exports show a decline in comparison with July, but show a rather substantial increase over a year ago. There was a slight decrease in shipments of boxes and cartons compared with July, of this year and August, 1928.

There is a marked decrease shown in shipments of surface-coated paper in comparison with both the previous month and August, 1928. Decreases in exports of toilet paper, blotting paper, and paper towels and napkins are noted in comparison with both periods mentioned above; tissue and crepe paper increased slightly over these periods. In addition to paper and board, $400,070 worth of paper base stocks were exported during August, as compared with $387,810 in July, and $414,300 in August, 1928.

Imports of paper and paper manufactures into the United States during August were valued at $13,985,751, July, $14,151,729, and August, 1928, $12,933,650.

Imports of news print for August are shown at 209,901 short tons—for July, 210,496 tons and for August last year, 173,871 tons.

Imports of other classes of paper and board during August were valued at $363,153, for July, $404,747 and for August of last year, $333,098.

News print importations during August were valued at $12,322,586, while July receipts totaled $12,338,494, and those for August, 1928, $11,416,787.

Imports of paper base stocks show a decrease in value compared with July, and an increase as compared with August, 1928. Pulpwood receipts, valued at $2,149,699 during August, increased to some extent as compared with both the previous month, and August, 1928. Ground wood pulp showed a substantial increase over both of the periods mentioned. Sulphite wood pulp shipments decreased to some extent under July, and increased somewhat over August, 1928. Sulphate shipments decreased compared with July, of the present year and August, 1928.

Total imports in this line were valued at $11,326,235 as compared with $12,014,066 in July and $10,231,395 in August, 1928.

MR. SISSON HONORED

Paper men will be pleased to learn of the appointment of George W. Sisson, Jr., head of the Racquette River Paper Company, of Potsdam, N. Y., as a member of the Executive Comimttee of the National Committee on Wood Utilization. Mr. Sisson was recently informed of his appointment by the Secretary of Commerce.

The national committee on wood utilization was established in 1925 by Herbert Hoover, then Secretary of Commerce. It grew out of a conference called for the purpose of organizing a campaign to combat timber waste in all stages of manufacture and use. Every phase of lumber conservation has been taken up by the committee.

In announcing the appointment Secretary Robert Lamont said that Mr. Sisson and the other members have accepted service with the committee because of their interest in the movement to perpetuate our forests. The committee's part in this movement is the promotion of efficient wood-utilization and the elimination of waste in wood using industries. Secretary Lamont also pointed out that special attention has been given by the committee to the development of manufacturing methods whereby small logs now left in the woods may be manufactured into lumber at a profit. It is also claimed that through its efforts new types of woodworking machinery which accomplishes just this object have been introduced in mills in the west.

Mr. Sisson served for several terms as president of the American Paper and Pulp Association, his administration being coincident with the World War. This period was naturally a critical one in the industry and his work for the association was of an outstanding character. He will be a valuable man in the position to which he has been appointed.

TO REPORT ON NEWS PRINT

Field work has been completed in the Federal Trade Commission's investigation of the news print paper industry and it is expected a report of findings will go to Congress in the next session. The report will be made public at that time.

The investigation has been conducted under direction of Senate Resolution 337, 70th Congress, introduced by Senator Schall, of Minnesota. It seeks to bring out information on the question of whether practices of manufacturers and distributors of news print paper tend to create a monopoly in the supplying of news print

paper to publishers of small daily and weekly newspapers or constitute a violation of the antitrust laws.

The commission is directed to report to the Senate its findings and its recommendations, if any, for necessary legislation.

Data regarding the existence or non-existence of practices suggested in the resolution have been gathered from all parts of the United States.

Heavy Vote in Brotherhood Election

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., October 19, 1929.—Thousands of ballots naming one of several candidates to the office of president of the International Brotherhoods of Papermakers are literally snowing under clerks employed in the offices of the organization in this city. All packages are sealed and will not be opened until the board of canvassers convenes on October 23. It is expected that the results will not be known much before November 1. The three-cornered fight for the leadership of the union, whose branches extend to all parts of the United States, Canada and Newfoundland, is almost without precedent in the history of the organization. Because of the constitutional rule of the organization that the successful candidate for the presidency must poll a majority of the votes cast it was announced that a second election is probable. The candidates for the post are Matthew J. Burns, Jeremiah Carey and William R. Smith, all of this city.

William R. Smith is at present chief executive of the organization but his re-election is being hotly contested by the other condidates. That great interest has been aroused by the battle is evidenced from the huge number of ballots being filed from every local connected with the organization. Changes in administration policy advocated by candidates opposing President Smith are having a principal part in deciding the outcome of the contest. The organization is being represented at the Toronto Convention of the American Federation of Labor by Frank P. Barry, first vice president, and Matthew Burns, a candidate for the presidency.

Sutherland Paper Co. Issues Good Report

KALAMAZOO, Mich., October 21, 1929.—A quarterly dividend of 30 cents a share has been declared by directors of the Sutherland Paper Company. This is payable October 31 to stockholders of record October 21.

For the quarter ending September 30 Sutherland Paper Company shows another substantial increase in profits. The statement issued by L. W. Sutherland, president, shows earnings for this quarter of $155,599.66. This is equivalent after reserve for Federal taxes to 45 cents a share on the 300,000 shares of common stock issued and outstanding. This compares very favorably with the earnings for the second quarter which were $132,032.35 before Federal taxes.

"Orders booked ahead for shipment during the last quarter of this year," said President Sutherland, "indicate a sales volume at least equal to that of the past three months with corresponding showing in net earnings. We are increasing our business in direct ratio to the rapid expansion in the food industry."

Nekoosa-Edwards Plane Takes Up Jurors

APPLETON, Wis., October 21, 1929.—The Nekoosa-Edwards Paper Company, of Nekoosa, Wis., received considerable publicity last week through its tri-motored "Nepco" airplane. A suit was being heard in the Wood County Court in which the company was defending itself against damage claims of land owners who claimed their farms suffered because of water backing up on their land. In order to give the jury a clear understanding of the situation, the eight men and four women were given a ride in the plane and taken on a tour of inspection of the area involved. E. P. Gleason, chief engineer of the paper company, accompanied them and explained the situation with regard to the lands.

Paper Production Increases in August

According to identical mill reports to the American Paper and Pulp Association, paper production in August registered an increase of 7.6 per cent over July, 1929, and an increase of 4.7 per cent over August, 1928. Paper production for eight months ending August, 1929, showed an increase of 6 per cent over the same period in 1928.

All individual grades, excepting hanging, bag and wrapping papers, registered increases over last year in the month's output. Uncoated book paper production showed an increase of 10 per cent over August, 1928, and paperboard increased 7 per cent, writing 5 per cent, tissue 9 per cent, news print 4 per cent and felts and building 6 per cent. Production of bag paper decreased in August, 1929, as compared with August, 1928, by 9 per cent, wrapping paper 9 per cent, and hanging paper about 1 per cent.

Shipments of all grades increased in August, 1929, except bag, wrapping and hanging papers, as against August, 1928, the total shipments being 5 per cent above the total of last year.

Increases in inventory at the end of August, 1929, as compared with July, 1929, were registered in all grades, excepting paperboard, tissue and writing papers. As compared with August, 1928, all grades excepting paperboard, felts and building, and hanging papers, showed substantial decreases in inventory. The total stock on hand for all grades increased 0.5 per cent over July, 1929, but was 8 per cent below that of August a year ago.

Identical pulp mill reports for August, 1929, indicated that the total production of all grades of pulp was 4 per cent greater than August, 1928.

During August, 1929, 17 per cent more soda pulp, 13 per cent more bleached sulphite and 10 per cent more groundwood pulp was consumed by reporting mills than in August, 1928, by 12 per cent in soda pulp, 11 per cent in kraft pulp and 7 per cent in bleached sulphite pulp. The total shipments to outside markets of all grades of pulp in August, 1929, exceeded the August, 1928, total by 9 per cent.

All grades of pulp, excepting news grade sulphite, easy bleaching sulphite and kraft pulp, showed decreases in inventory at the end of August as compared with the end of July, 1929. As compared with August, 1928, all grades excepting easy bleaching sulphite and kraft pulp, registered decreases in inventory.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF AUGUST, 1929

Grade	Production Tons	Shipments Tons	Stocks on Hand End of Month Tons
News Print	120,868	118,789	25,656
Book (Uncoated)	90,148	89,287	39,208
Paperboard	233,752	236,024	64,788
Wrapping	52,354	51,655	49,649
Bag	14,814	14,720	5,115
Writing	31,154	31,742	37,472
Tissue	14,564	15,244	9,127
Hanging	5,254	4,957	5,402
Felts and Building	6,954	6,644	2,279
Other Grades	26,700	26,450	15,783
Total—All Grades	596,562	595,512	254,479

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF AUGUST, 1929

Grade	Production Tons	Used Month Tons	Shipped During Month Tons	Stocks on Hand End of Month Tons
Ground Wood	72,721	92,147	2,384	89,688
Sulphite, News Grade	40,053	35,847	3,747	7,551
Sulphite, Bleached	26,514	24,707	2,110	2,587
Sulphite, Easy Bleaching	3,235	3,040	114	783
Sulphite, Mitscherlich	6,823	6,152	739	517
Sulphate Pulp	31,936	25,335	5,613	6,270
Soda Pulp	26,205	17,092	9,251	4,136
Pulp—Other Grades	78	.....	53	44
Total—All Grades	207,565	204,320	24,011	111,576

Geo. S. Witham, Sr., Not To Retire

In announcing the resignation recently of Geo. S. Witham, Sr., from the Union Bag and Paper Corporation, it was stated that he intended to retire from business. Mr. Witham writes the PAPER TRADE JOURNAL that he has no such notion or plans. Mr. Witham's many friends in the paper business will be glad to learn this as the industry can ill afford to spare men of his ability and experience.

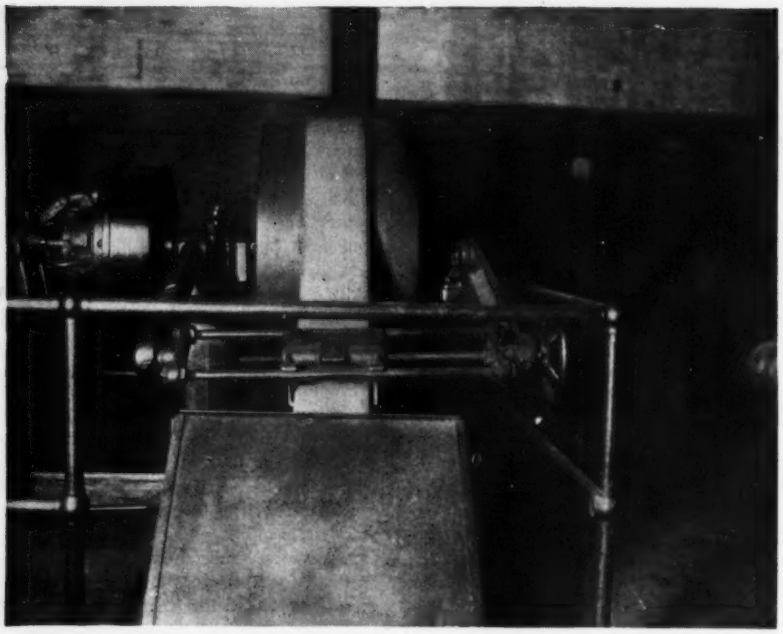

Photo shows a sectional cone drive in a board mill. Highflex belts, because of their remarkable construction principle, are breaking all records on paper mill cone drives. See article below

Highflex belts reduce costly shut-downs resulting from stretch and slipping

BECAUSE the shafts in paper mill cone drives are fixed, it becomes highly important to have a belt with minimum stretch. Owing to their unique construction principle, Goodrich Highflex belts are proving themselves an ideal belt for sectional cone drives.

Highflex belts have excess stretch removed during the process of manufacture. Finished Highflex belts, under tests, show a minimum of inelastic stretch and just enough elastic stretch for proper shock absorption.

The low factor of stretch in Highflex belts, therefore, reduces the frequent —and costly—shut-downs resulting from slipping of old-type belts.

As a result of this feature, Highflex belts also possess a higher power capacity, and last longer. Highflex belting, now running on scores of sectional drives, is breaking all records for length of service before shortening becomes necessary.

The square edges of Highflex belting, because foldless, present a better wearing surface against shifters, and prove their economy through greater immunity to rupture.

Highflex belting is carried in stock in the following sizes especially designed for cone drives: 6″ 6 ply; 8″, 10″, 12″, 14″, 15″ and 18″ 7 ply; as well as 10″, 12″, 14″ and 16″ 8 ply. Cone belts are also made to order in thicknesses up to 10 ply. Some mills have successfully adapted endless Highflex belts, with idler pulleys, to sectional drives.

GOODRICH VULCALOCK COUCH ROLLS

Goodrich process eliminates hard rubber base — rubber cover is joined directly to the metal core. Adhesion 500 lbs. to the square inch. Can be made with aluminum core, cutting down weight by two-thirds. Send for details.

We will gladly send catalogue 2105 on Highflex belting. Write to The B. F. Goodrich Rubber Co., (Est. 1870.) Akron, O. (in the West, Pacific Goodrich Rubber Co., Los Angeles, Cal.), or fill in the coupon below.

Check List of Goodrich Products used in the Paper Industry:

Vulcalock couch, worm, and press rolls —Highflex belting—Rubber lined pipe and fittings—Fire, water, air and steam hose—Cutless rubber bearings, rubber lined tanks, screen diaphragms, gaskets, packing—Flexite buckets and dippers.

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Report on Physical Standards for Pulp*

By Donald E. Cable,[1] Chairman

Our work for the year ending March 1, 1930 is designed merely as a start in a large program of work which we trust will eventually lead to the adoption of standard methods for the making of sheets in the unbeaten test and for the making of sheets after processing of pulp for various intervals of time. We hope to evolve specifications which will be used first in the making of very careful and highly accurate measurements of the physical characteristics of a pulp where the element of time is not an important consideration and later another set of specifications which will be admittedly less accurate but better suited for control tests where the time of making a test should be reduced to the very minimum.

As was brought out at the discussion last February during the morning devoted to the Committee on Physical Standards for Pulp, it is of vital importance that our committee undertake this work in a series of steps, obtaining the adoption of one step at a time in order to make definite progress. An attempt on the part of the committee to agree within itself on a complete series of specifications regarding all phases of pulp testing, we believe, is too ambitious a program to be undertaken within a period of one year. However, by building up our work in stages we expect to thrash out each feature and come to some agreement before going on to the next.

There are some phases of the pulp testing procedure on which we can expect more or less prompt and universal approval on the part of the committee and also of the Association, such as the best manner in which to test the sheets once they are made, regardless of how the fiber has been pressed prior to the making of those sheets.

The next and more difficult feature to settle within the committee and later within the Association has to do with the best suited basis weight of sheet for the making of highly accurate physical tests. This is a matter on which there is a wide diversity of opinion now. Consequently, it will be necessary for us to strike a happy medium so as to please the largest number of parties concerned.

These two steps we believe are not too difficult to cover by the end of this year, but the final part of our program will without doubt involve a considerable exchange of correspondence, as past experience teaches us that opinions are divided regarding the advisability of making the unbeaten test and the advisability of using the beater with controlled bed plate as against the flint pebble mill or bronze rod mill with stainless steel rods for hydrating the fiber.

In the course of a few years we hope to have constructed a complete plan of testing any kind of pulp, involving most of the more generally recognized methods now practiced in the industry, leaving it to the discretion of the individual to decide which of the various standard tests he will regard as best adapted to his immediate needs.

This outline of work for the coming year and future years is decidedly not brief, but the work of the Committee on Physical Standards for Pulp is unquestionably a large undertaking and one which if successfully handled will be of great help to the Corporate and individual members of the Association and well worth the vast amount of effort to reach a successful conclusion.

Bibliography of Pulp Testing Prepared

Two of the four major steps that were brought to the attention of our Secretary early last June have by now been completed and are as follows:

1. One of our committee members, Mr. W. F. Moore of the U. S. Testing Company, has prepared a literature review on the subject of woodpulp testing methods in order to help all members of our committee and other interested individuals to comprehend the vast scope of suggestions, ideas and experimental data, published along this line during the past twenty-five years. This review consists of more or less lengthy abstracts of sixty-three technical contributions and has been published under one cover through the courtesy of THE PAPER TRADE JOURNAL.

2. A lengthy questionnaire has been submitted to all members of our committee bearing on important questions that must be settled by vote or by compromise relative to what features should be embodied in a standard method or group of methods for testing a wide variety of pulps and relative to various details of such method or methods.

Committee Recommendations

Responses to this questionnaire have been received from nine of our twelve members. The following specific committee recommendations are based on the wishes of a majority of those nine who have made their desires known:

A. Approval should be obtained for Appendix Sections A, B and C of the proposed "Standard Methods of Preparing Test Sheets" (see Tech. Assoc. Papers for June, 1928, pp. 50-52) as a part of a set of *standard specifications for a highly accurate method of determining important strength characteristics of pulp.*

* Read at the fall meeting of TAPPI, Richmond, Va., Sept. 25, 1929.
[1] Asst. Dir. of Research, Oxford Paper Company, 87 35th street, Brooklyn, N. Y.

B. We urge the adoption of Appendix Section D—Official Paper Testing Methods (see Tech. Assoc. Papers for June, 1928, pp. 52-54) as a part of a set of standard specifications for a highly accurate method of determining important strength characteristics of pulp, assuming that Section D is corrected for typographical errors and omissions so as to conform strictly to the wording for the official methods for Bursting Strength, Tearing Strength, Folding Endurance and Tensile Breaking Strength of paper as given on pages 53-55, 58-62, and 66-72 of "Paper Testing Methods" by TAPPI (1928).

C. We are in favor of the adoption of a section entitled "Method of Expressing Strength Values for Pulp Tests" which will read as follows:

"Results shall be reported in points per 100 pound basis weight (25 x 40, 500) which are obtained by multiplying the results secured according to the official methods, by 100, and dividing the product by the basis weight (air dry at 65% R. H. and 70° F.) of the test sheets.

"Bursting strength, tearing strength, folding endurance, and tensile strength shall be reported in this manner. Per cent stretch shall be reported as in the official method for determining stretch of paper."

It is fully realized that as test sheets are made of varying weights from a given pulp, the above quotient (expressed as points per 100 pound basis weight) will not remain constant, particularly for the tearing and folding endurance tests. It is fairly constant, however, over a limited range for the tensile or bursting strength determinations. We hope to minimize this source of error by standardizing strictly in regard to the basis weight of test sheets to be used. Data obtained at some future time may induce us to adopt some more rational way of expressing by empirical units the strength characteristics of pulp or paper sheets.

D. The nine members of our committee favor the arbitrary adoption of basis weights (for a ream—25 x 40, 500) varying between 50 and 125 pounds. The average of those figures reported is 83.5 pounds. This basis weight is for the standard unbeaten test only. It is interesting to note that the recommended basis weight of the test sheets as given in the standard TAPPI pulp testing procedure of 1916 was 68 to 83 pounds for pulp processed in the pebble mill. A critical examination of the literature references cited by Mr. Moore shows that (disregarding the abnormally heavy sheets recommended by Sindall in 1923) the average basis weight of test sheet proposed in the literature is 83.7 pounds (24 x 40, 500). It thus appears that a basis weight of 85 pounds is the logical compromise weight for us to adopt if one and only one basis weight is to be selected as standard for all kinds of pulps and all kinds of physical tests on those pulps.

E. The Chairman suggested the adoption of two standard basis weights for the making of standard pulp strength tests. One could be a heavy weight sheet (say 100 to 120 pounds per ream) for use primarily in the testing of short fibered or weak pulps and in the making of tearing and certain other tests, while the other could be half that weight (say 50 to 60 pounds) for the testing of strong pulps, particularly for folding endurance after considerable hydration. This suggestion has been voted down by a slight margin.

F. The desired size of test sheet wanted by the nine committeemen varied from a 5 x 5 square to an 8 x 8 inch square. Two recommended rectangular shaped sheets (5 x 7 in. or 7 x 9 in.), but the others preferred square sheets (one wanting 5 x 5 in., one—6 x 6 inch., two—7 x 7 in. and three—8 x 8 in.) The average sheet area of those recommended is 50 square inches. Not one of us expressed a preference for sheets of a circular shape.

Standard Pulp Evaluation Method

As a result of this questionnaire the committee has decided to develop a set of standard pulp testing methods which will embody the following general features:

I. Method of sampling pulp.

II. Apparatus and method used in making and conditioning the sheets.

III. Preparation of sheets from disintegrated but unhydrated fiber (for unbeaten, felting or initial test).

IV. Preparation of sheets from both pebble mill hydrated and disintegrated fiber after two or more time intervals.

V. Preparation of sheets from small beater processed fiber with stock for the sheets being removed progressively from the beater at regular time intervals.

VI. Provision is to be made for the testing of the above pulp sheets according to one or more of the following types of physical measurement:

a. Bursting strength
b. Tensile breaking strength
c. Tearing strength
d. Folding endurance

VII. Results are to be reported according to Section C above.

During the past few months our Committee has been supplied with illustrated copies of the British "Proposed Standard Method of Pulp Evaluation—Initial Strength Test" through the courtesy of Mr. E. P. Cameron. We have studied it carefully and would be pleased to have one or more members of TAPPI give the method a thorough trial and later report to us their observations. The British testing apparatus may be purchased by writing to the Secretary of the Technical Section of the Paper Makers' Association of Great Britain and Ireland 1912 (26 and 27 Farringdon Street, London, E. C. 4). The only items of their equipment which seem unnecessarily costly are the standard disintegrator, spare propeller, belt and propeller gauge and two templates for cutting the sheets which collectively costs over $200 (exclusive of duty).

The British sheet mold makes circular sheets of slightly over six inches in diameter. Rectangular test strips are cut from the round sheets after air drying with the aid of a knife and templates.

Our committee would also welcome a technical contribution from some of our members in United States or Canada, bearing on their experience in using the Lampen single ball mill for the purpose of effecting hydration in testing pulp for its potential strength characteristics.

A world wide recognized standard method of testing pulp for physical qualities would be a godsend to almost every maker, consumer, seller or buyer of pulp. So many methods have been suggested in the past and are being used now throughout this and other countries that a deplorable state of confusion exists which calls for many compromises and the adoption of a universal standard method that will possess a maximum number of good, sound features and a minimum of the inaccurate and unworthy features known in the present nebulous state of pulp testing methods.

TAPPI Notes

R. A. St. Laurent formerly with Arthur D. Little Company is now with the Rogers Paper Company, South Manchester, Conn.

Mrs. E. C. Jahn sailed this week to join her husband Dr. E. C. Jahn who is the TAPPI American Scandinavian fellow at Holmens Bruks A/B, Halstavik, Sweden.

G. A. Ritter formerly chemist with the Parker Young Company of Lincoln, N. H. is now with the Brown Co. of La Tugue, P. Q.

Ivar Lundbeck, technical director of the Thilmany Pulp and Paper Company of Kaukauna, Wis., was a recent visitor to the Technical Association office in New York. Mrs. Lundbeck and son returned from Sweden last week on the Gripsholm.

E. O. Reed, technical director of the Government Printing Office has become technical director of Crane & Co., Dalton, Mass.

J. Barcham Green, partner in the firm of J. Barcham Green & Son of Maidstone, England was a visitor to the TAPPI office this week. This company manufactures hand made papers including paper currency for Great Britian. Mr. Green sailed for England on Saturday.

Thermodynamics of Drier Shell Heat Transfer*

By F. C. Farnsworth[1]

Steam that has been condensed to water as the result of having given up its latent heat of evaporation means that a pound of steam, for example at 15 pounds gauge pressure, has but 945 degrees latent heat of evaporation, while a pound of steam at only 5 pounds gauge pressure has 960 degrees of latent heat of evaporation or 15 degrees more at the lower pressure, than at the higher pressure, but the total heat has 8 degrees in favor of the higher pressure as the total heat includes the heat of the liquid, by the fact that the liquid is constantly removed means, that the total latent heat volume is greatest from the steam at lower pressures, but this does not mean that steam at the lower pressures will dry the most paper, because the amount of heat given up to evaporate water depends entirely upon the temperature difference between the inside and the outside of the drier. In comparing steam volume for drying capacity without regard for efficiencies in values between 5 pounds and 15 pounds, shows that there is a difference of 22 degrees or 2½ per cent increased drying capacity in favor of steam at the higher pressure.

Water on the inside of the drier cools the drier shell as well as the water in the paper on the outside. For instance, wet paper, going over the first driers at a temperature of say 50 degrees and the inside temperature of steam at gauge pressure of 5 pounds or 228 degrees or a difference between inside and outside of 178 degrees, while with steam at 15 pounds at 250 degrees, a difference of 200 degrees or 22 degrees greater difference with steam at 15 pounds than at 5 pounds, this difference does show in favor of the higher pressure so far as actual increased drying capacity is concerned. It is actually a fact that steam costs are more at the higher pressure, because at these higher pressures the actual number of B.t.u's. per pound of steam is less than at 5 pounds pressure to the extent of 15 degrees as shown heretofore.

Low Pressure Steam Less Costly

While it is shown herewith and is a known fact that steam at lower pressure is the least costly, yet there are other factors wherein the small saving of steam cost is overshadowed by equipment cost, space, and many things too numerous to mention. That is, to dry a large quantity of paper with steam at low pressure might require many driers, a considerable space and much power, and although the low pressure might help improve quality and steam costs, the capital investment and power for operation cost might overbalance the lower pressure values.

To show how steam consumption varies from the wet end of the paper machine to the drier end, it was shown heretofore, that there were 200 degrees difference between the inside and outside of a drier with paper at 50 degrees and steam at 15 pounds gauge pressure at 250 degrees. Now assume that the paper going over the last drier was so nearly dried and at a temperature of 200 degrees and the steam on the inside of the drier 250 degrees, or only one quarter the temperature difference of that of the wet end drier which has 200 degrees difference or relatively using but one quarter of the steam in the last dry end drier that was used in the first wet end drier. Of course, due allowance must be made for the drier surface not in contact with the paper, that would be in relatively the same room temperature so that this part of the drier would utilize about the same amount of steam whether at the wet end or dry end.

Resistance to Heat Transfer

The things that will retard the maximum flow of heat through the shell are elements such as water, air, dirt, scale and oil. In the paper machine evaporating water is the greatest factor, next comes air heating.

Water lying in the bottom of a drier is a product of steam giving up its latent heat, and this water, a by-product so to speak, while it has heat value it only contains about one fifth the amount it would have as steam. What little heat value

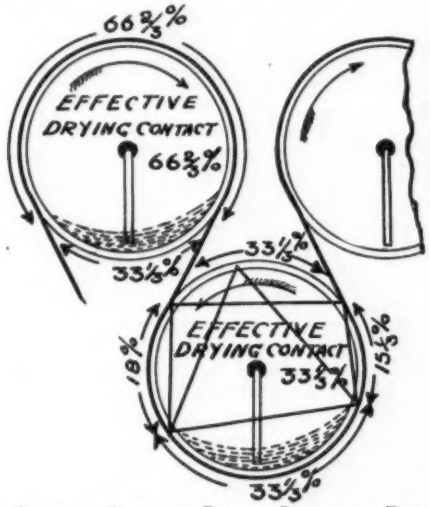

Diagram Showing Effective Drying Section of Drier Surface

there is left in the liquid is quickly given up through the shell leaving cool water in the shell. The heat in the water not adjacent to the shell will not travel through the cool water on the shell surface, and the heat from the steam will also not penetrate the water film. As an insulator, water is even better than asbestos.

Effect of Water in the Driers

Water in the driers cools the shell of the drier, retards the flow of heat, and adds additional total weight to the driers. An inch of water over the bottom of each drier will add tons to the weight of the driers, causing greater friction and more power consumption. It only requires 50 pounds of water in the bottom of a drier to double the horsepower required to drive the average drier.

One of the best ways to illustrate what an insulator water is when lying in the bottom of the driers is to hold your hand on the bottom of a drier containing water an inch deep when heating the driers on Monday mornings. The top of the drier in direct contact with dry steam will heat up the instant that steam comes in contact with it but will be several minutes before you will burn your hand. It would be a much longer time if it were not for the fact that steam hitting the top of the drier condenses into water and the hot condensate falls down into the cold water and heats this water much faster than would otherwise be evident if just the steam on top of the water

*[Note:—Thermal efficiencies of drier shell heat transfer involve many things. There appears to be much interest by paper mill operators in the problems involved and there is so much that could be said covering such a broad and deep subject that I am able only to touch the subject in parts, endeavoring however, to make the subject clear without going too deeply into mathematics.]

[1] Member TAPPI; President, Farnsworth Company, Conshohocken, Pa.

were required to penetrate through the water and get to the lower shell while that part of the drier not covered with water will heat instantly.

Try holding a pyrometer against the top shell of the drier and one against the bottom where the water is, and see how long it takes to transfer heat from steam through a body of water but one inch deep. The pyrometer will indicate after a time the same on the bottom as on the top which means nothing insofar as volume heat transfer is concerned.

Various Rates of Heat Flow

One must consider that there are several distinct rates of heat flow through the shell of the driers; 1, the flow through that part of the drier covered with water and in contact with paper, 2, the flow through that part of the drier covered with water and not in contact with paper, 3, the flow through shell of the drier in contact with paper and no water, and 4, the flow through the shell where there is no contact of paper or no water on the inside and only air at room temperature on the outside. Then consider the end of the drier and its surfaces only in contact with air at room temperatures. These are surfaces entirely wasted and should be covered. If these radiating surfaces were in some paper mill owner's home and being heated all year, and coal being paid for they would be immediately covered.

Considering the numerous varieties of heat flow conditions in a drier shell, the fact that as the paper passes each drier toward the dry end where it is hotter, the paper becomes hotter as it reaches each succeeding drier and there is less temperature difference between the inside and outside, it is almost impossible to figure out the actual heating or drying capacity.

However, it may be seen what the advantage is in the removal of water from the inside of driers. In the ordinary operation of the average drier there are several temperature changes in the shell. By this I mean that heat travels so fast that paper leaves contact, and air at room temperature contacts the outside face of the drier and the drier instantly comes to a higher temperature so that the next paper contact of the shell would be at much higher temperature, and naturally the temperature would decrease with paper contact to a point somewhere between roon temperature and the temperature of steam inside. If the space of no paper contact were considerable the drier surface temperature could increase considerably so that when paper from over the top roll contacts with the drier again this increased temperature might possibly cause poor drying, cockles, etc. Then as the paper revolves downward with the shell of the drier the shell again reaches a temperature somewhere between that of the steam and the wet paper until the drier shell is doused into water lying on the inside of the drier which again cools the shell. This leaves a cool drier shell to come in contact with steam free of water so that the shell continues to heat and possibly increases in temperature until the paper leaves it and the shell is again exposed to room temperature or temperature that is even hotter than this because the hot vapors which increase the temperature until it again contacts with the paper.

Considering these heat changes as the driers revolve it can be seen how difficult it would be to dry paper with thin copper shells where the heat change would be instantly sensitive. The thick drier shell offers advantages for making quality paper because it is less sensitive to the instant changes of temperature as described. Complete removal of all water from driers is obviously the one way to bring the temperature most nearly uniform.

Temperatures of Driers

It is highly important that the drier shell should not be too hot as the wet cold paper passes to the first wet end drier because a drier that is very hot will sear or singe the outside fibers of the paper next to the shell of the drier and dry them thoroughly before the water on the inside has left the paper which means that all the water passing through these once dried fibers will show discoloration and cause shrinkage of the sheet on many grades of paper.

It is absolutely essential that the drier at the wet end be at a low temperature and the temperatures gradually increased in approaching the dry end. This requirement seems most noticeable on pulp drying or in the drying of kraft and book paper.

The one best way to accomplish these results is to have the temperature on the inside of the driers increase as the temperature of the paper increases in the travel toward the dry end. Only graduated steam pressures will effect the gradual use of inside temperatures. This temperature graduation is made easy by blowing the steam through a section of dry end drier and then through a good separator, taking the water out and then blowing it through another section reducing the size of sections until it is brought down to one drier at the wet end. This method reduces the pressures and temperatures automatically and also automatically brings all the air for extraction to the one wet end drier.

The pressure drop between sections can be regulated by water seals that will hold a definite set drop in pressure and thus provide uniform graduation of temperature.

Water Removal

The blowing of steam from one section to the other insures absolute removal of water from the driers because it develops velocity out of its syphon pipes and lifts the water that lies below the end of the syphon pipes. It also sets up a good circulation of steam in the driers and thus provides uniform temperature across the face of the driers. The details of doing such work should be handled by experts in this line because without a good knowledge of the principles involved more damage than good can be done to the drying system.

Sensitive pyrometers are now available that will pressure the temperature of the outside shell of driers and will show variations of temperature of steam in the driers. The pyrometer reading will indicate the presence of water in driers and show the inefficiency of driers containing much air or water.

Although it is true that the pyrometer can be applied to the face of the drier only in the space where there is no paper contact still within this space if no water is present the temperature difference from drier to drier will be relative and will show a gradual uniform increase in temperature as driers approach the dry end of the paper machine. However, tests will show that without the proper drying system for keeping all water and air out of the driers there will be a great fluctuation of temperature from one drier to the other and the temperature will even vary across the face of the driers because water accumulates at greater depth in some spots than others.

There is no mechanical difficulty in having a syphon pipe in the front of a wide drier as well as in the rear. With the proper system for causing the syphons to blow steam hard two small syphons could be used, and with only the syphon pipe leaving the front of the drier it would simplify the application, and with brass pipe held close down the front around the frame of the driers the front syphon pipe would not be unsightly to a paper machine.

Location of Syphons

Furthermore, syphon pipes should be staggered in their distance from the rear of the driers as the nozzle of the syphon pipe with the proper drainage system means that all water is being sucked out at the entrance of the syphon pipe. Should the syphons all be at equal distance from the rear of the drier there is apt to be a wet spot in the paper exactly in line with the ends of the syphon pipes.

It is not hard to vary the syphons over a space of 12 to 18 inches by putting different radii in the bend of the syphon pipes and staggering them.

Water to leave a drier through a syphon pipe must go up over the center of the drier and to lift hot water is a simple job. Some try to suck it up with a vacuum pump, and some try to use an ejector tee or a syphon venturi nozzle. All of these ways as above are poor and ineffective when compared with the simpler way of letting the syphon pipe blow steam to a point with lower pressure.

Steam blowing to lower pressure of just 1 pound means that the velocity will go up to 5000 to 10,000 feet per minute. With this in mind, it is obvious that to blow steam at these high velocities out of drier the syphon pipe will pick up the water that lies below the end. And it is evident that if the steam going out through a syphon pipe carrying water with it is taken away through a separator the steam is still valuable as a drying medium to be used in drying at the wet end of the paper machine. The drop in pressure caused by the condensing effect should cause such a rush of steam through the driers that greater drying capacity and better drying conditions should prevail because of the gradual reduction pressure and temperature at the wet end.

Assume that water for some reason should lie, in the drier in amounts equal to that shown in the sketch and assume that steam at 15 pounds gauge pressure were used, note the effective drying capacity of the top drier and the greatly retarded drying capacity of the lower drier, and how with such a condition on one side of the paper throughout the whole paper machine it could be dried almost twice as much as the other because as the paper passes over the driers one side is always in surface contact with the top drier whose heat transfer is not impeded by a water film, while the other side is always in surface contact with the lower drier with the water film inside the drier shell. This condition could cause curling of paper, cockles, etc.

Effect of Water Removal from Driers

Any paper manufacturer can learn the value of properly removing all water and can make an inexpensive test by the use of a pyrometer to obtain the temperature of any drier, then disconnect the syphon pipe from the return header of same drier and let the syphon pipe blow steam out of the window. This method will cause steam and water to blow out the syphon pipe at a speed of from 3000 to 10,000 feet per minute depending upon the pressure carried in the drier. What this procedure will do is to carry such a velocity of steam out the syphon pipe that it will set up a suction at the nozzle of the syphon drawing all water from the bottom of the drier. There is positively no other way to pull the water up that lies below the end of the syphon pipe.

This process will demonstrate another valuable point in that the amount of steam blown out of the syphon pipe means that the equivalent additional amount of steam must be drawn into the drier. This naturally sets up a circulation of steam in the driers and causes the absolute removal of all air because considering the amount of steam passing through the driers no air could remain.

It is obvious that with such a turmoil of circulation, uniform temperature across the face of the driers is sure to prevail, and with steam being drawn out of the syphon pipe in the full volume of the pipe it causes a scrubbing effect and draws the water faster from the front of the drier toward the spot where the syphon pipe outlet is located. It is also obvious that if such a condition could be made possible in every drier that maximum drying capacity and more uniform temperature would prevail.

Such a condition is available in a drying system that will cause every syphon pipe to blow steam to its fullest capacity. Yet no steam is wasted, rather the steam that is blown from the syphon is used again in sections of the drier at the wet end. It is used to a very great advantage in making of paper because it is taken to the wet end section of driers through separators that have to be exceptionally good because such great volumes of water are mixed as the steam is blown from the driers. This steam enters the driers at lower temperature and has even greater heating and drying value, but does not have the temperature needed. Then as it is passed through, section by section reducing the section in size until the first drier forms the last and final section it is quite obvious that all air travelling with the steam at such great speed finds its way to the first drier almost instantly, and under such conditions quick heating of driers on Monday morning start-up is possible because the air is all removed in but a few moments and removed constantly as fast as collected.

Wet paper going over the first wet end drier provides a surface condensing effect, causing drop in pressure of the steam in that drier, and as the steam supply to that drier is taken from the syphon pipes of some of the succeeding driers through a separator, the steam flow out of the syphon pipe is constant and the velocity and speed of the steam is entirely dependent on the drop in pressure caused. If the condensing effect of the cold paper is greater than the steam supply from the syphon pipes the pressure will drop and as pressure drops the speed of steam increases.

The fact that separation of water from steam is effected more easily at slow speed indicates that some means to avoid excess pressure drop between sections is absolutely necessary. Too much pressure drop between sections retards drying capacity, because while steam at lower pressure has more latent heat per pound it does not show equal temperature difference between inside and outside of drier shells as described heretofore. Therefore, accurate and dependable means of automatically supplying the difference of steam between sections in the even syphon pipes is one of the most important points and items in a drying system for drying paper and it has been found that the water seal control is a reliable method. The water seal method is desirable as a simple means of extending the steam header of one section into a chamber of water in the separator in the return header line that is supplying steam to the steam header of the succeeding section so that this seal connection of a pipe at a depth in the water of 27 inches means 1 pound differential will break the seal and let steam pass from the one steam header to the other through the broken seal.

One of the things that has always been a mystery is that paper machine builders will supply the same size steam supply to driers at the wet end as at the dry end where four times greater heat transfer per square foot of surface prevails at the wet end driers.

Zellstoff und Papier for TAPPI Members

Carl Hofman publishers of technical books and journals relating to the pulp and paper industry announces that the publication Zellstoff und Papier will in the future be available to members of the Technical Assocation of the Pulp and Paper Industry at a price of $1.70 per year. This is the special subscription rate offered to members of the Verein der Zellstoff und Papier Chemiker und Ingenieure, the German TAPPI which originally founded this publication. This magazine is a monthly periodical which publishes practical and scientific articles, a review of European publications and of all the German patents of the pulp and paper industry. The address of Zellstoff und Papier is Dessauer Strasse 2. Berlin S W 11, Germany.

Ben Alexander Honored

Appleton, Wis., October 21, 1929.—Ben Alexander, of Wausau, Wis., has been honored with election as president of the Wisconsin Reserve Officers Association. He is a captain in the reserve corps. Mr. Alexander is a capitalist who is interested in several paper mills in the Wisconsin River Valley.

Measurement of Strength and Stiffness of Fiber Boards By Means of Static Bending*

By C. C. Heritage [1a], E. R. Schafer[1b], L. A. Carpenter[1c]

It is generally conceded that there is a lack of satisfactory methods for evaluating fiber board products in numerical terms. The importance of securing precise methods not only from the standpoint of knowing whether a given product will be satisfactory for a particular use but also from the standpoint of manufacturing control is admitted by all familiar with the present situation.

It has recently been necessary in work at the Forest Products Laboratory on the utilization of Douglas fir saw mill waste to evaluate homogeneously felted boards, such as insulating board, relative to strength and stiffness. Strength and stiffness in static bending were selected as the types of resistance to rupture and deformation that are most important relative to use, most easily determined, and most satisfactorily handled theoretically. The method has also been used on other types of boards and found applicable to any board of sufficient stiffness to be tested as a beam. A further application has been in the strength evaluation of pulps.

Fundamental Considerations

The following discussion will be entirely familiar to engineers. Its inclusion here, however, is felt to be desirable in order to indicate that the use of precise engineering methods is not beyond practical application in the ordinary paper mill laboratory.

The static bending test is made by freely supporting the specimen horizontally at two points as a beam and applying a load at the center of the span. The application of an external load sets up within the material a proportional uniformly distributed stress and a proportional resistance to deformation, or distortion, called strain. Upon the application of various loads the ration of stress to strain is constant between zero and a limiting load, that is, stress and strain have a straight line relationship. Above this limiting load the ratio is not constant and the strain increases at a greater rate than the stress. This point is called the elastic limit. Below the elastic limit the beam remains elastic and will regain its initial form of zero deformation or strain if the load or stress is removed[2]. If the thickness of the beam, the width of the beam, the span between supports, and the load at the elastic limit are known, the extreme fiber stresses can be calculated for conditions existing at the elastic limit. This value is also called the modulus of transverse strength. If the loading be continued to rupture the analagous figure, or modulus of rupture, may be calculated. Both of these values are measures of the strength in bending of the structure as existing in the beam and are independent of the actual dimensions or loads.

The stiffness of a material differs from its strength in that it is a measure of the resistance to deformation, whereas strength is a measure of the resistance to rupture. The determination of stiffness in a beam subjected simply to an external force in tension may be obtained by the ratio of the unit stress[3] to the unit strain[4] at any point below the elastic limit. This value is called the modulus of elasticity in tension, or "Young's modulus," and is also a property of the structure independent of its dimensions. The calculation of the modulus of elasticity is, however, more complicated when the beam is subjected to an external force in bending. In this case both tension and compression forces are in play and the strain is not measured parallel (as an elongation) but perpendicular to the beam.

The usual engineering formulae for calculating these moduli are:

Modulus of transverse strength (T. S.) in bending =

$$\frac{3pl}{2bd^2} \text{ pounds per square inch}$$

Modulus of rupture in bending =

$$\frac{3wl}{2bd^2} \text{ pounds per square inch}$$

Modulus of elasticity in bending =

$$\frac{(\text{Mod. of T. S.})^5}{6\,ad} = \frac{Pl^3}{4abd^3}$$

where

Load at the elastic limit = P lbs.
Load at rupture = W lbs.
Deflection at elastic limit = a in.
Thickness adjacent to rupture = d in.
Width of the test specimen = b in.
Length of span = l in.

It should be noted that the modulous of rupture is not a true fiber stress because its calculation is based on assumptions that are true only within the elastic limit. It is an accepted term in engineering work, however, and its usefulness is not destroyed thereby.

Testing Method and Apparatus

Since there are various methods of applying stress with accompanying strain, the best procedure is to select those conditions that are the least involved and at the same time capable of giving accurate results. A very satisfactory and easily constructed apparatus for carrying out the static bending test is shown in Fig. 1.

A solidily built table is fitted with two iron rods of ⅜ inch diameter which pass horizontally through the table. The ends of the rods extend out 3½ inches from one side of the table and have loosely fitted brass sleeves. The rods are set six inches apart and the extensions serve as shoulders to support the beam of fiber board[5]. A pail of convenient size is equipped with a stirrup attached to the bail, which slips over the test beam and makes even contact at the center position of the beam throughout the test. Water is delivered into the pail at a constant rate through a calibrated glass tip orifice fed by a constant level reservoir consisting of an ordinary suction flask fitted with a syphon. Water was selected as the most practical and easily controlled loading medium. Sand or shot could be used but either must be kept dry and the flow through an orifice is difficult to maintain at a uniform rate. Mercury could be used without much difficulty but requires more elaborate equipment. A device for magnifying and

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* Presented at the fall meeting of TAPPI, Richmond, Va., Sept. 24, 1929.

[1a] Member TAPPI, formerly in charge, Section of Pulp & Paper, Forest Products Laboratory.

[1b] Member TAPPI, Associate Engineer, Section of Pulp & Paper, Forest Products Laboratory.

[1c] Junior Chemist, Forest Products Laboratory, Madison, Wis.

[2] The terms "deformation or strain" and "load or stress" are used here advisedly. In this report the application or removal of both strain and stress is implied to be synonymous with application or removal of external deformation and load respectively. An elastic body may, in addition, be under internal strain which may become zero upon the removal of an internal stress. An example of this is in the annealing of metals and of glass. In this case the material could not be strictly considered as being in a state of deformation because of the application of a load.

[3] Stress divided by the area of cross section of the specimen under stress.

[4] Strain divided by the length of specimen under tension.

[5] The distance between the supports depends on the dimensions and stiffness of the beam. For a given thickness (or depth) of beam, a beam of double span will attain a given deflection with one-quarter of the stress. The span found suitable for most pulp boards is from 15 to 24 times the thickness.

indicating the deflection of the specimen under test is mounted on the edge of the table and so attached to the stirrup that a deflection of the specimen at the point of application of the load is measured to one-thousandth of an inch.

The board to be tested is brought to moisture equilibrium in an atmosphere of 65 per cent relative humidity and 72°F. The test samples are sawed either 1.5 or 3 inches wide. The limitation of the loading apparatus determines which width can be used. For the apparatus described here the specimen must fail with a load of less than approximately 28 pounds. Board samples 1.5 inches in width have, therefore, usually been required. The specimen may be 8 to 12 inches long. The length must be sufficient to prevent the beam from slipping off of the supports before rupture has occurred. Two pieces of commercial board with the grain in the machine direction and 2 pieces with the grain across the machine direction are tested, one of each machine direction with the wire side up. The average values for the "in" and "across" direction samples are recorded separately. Experimental boards usually do not have a grain or "machine direction" and if circular (as made at the Forest Products Laboratory) two specimen strips are cut from each board, one on each side of a diameter line. The average result of the tests of two samples from each of two boards is taken.

The test strip is placed on the supports with the stirrup and pail carefully hung in the center of the span. The construction of the deflection indicator does not permit the pointer to be accurately set at zero before the application of the initial load, which is the weight of the empty pail, and stirrup. The deflection pointer is therefore set at zero by adjusting the indicator dial after the pail is hung in place. Since the strain is directly proportional to the stress below the elastic limit, the deflection caused by the initial load may be easily obtained in the subsequent calculation. The water siphon is started and the deflections read every 30 seconds. A watch is used that can be stopped upon the instant of rupture, thus the total water delivered is determined exactly by the duration of the test. If the water supply is obtained from water

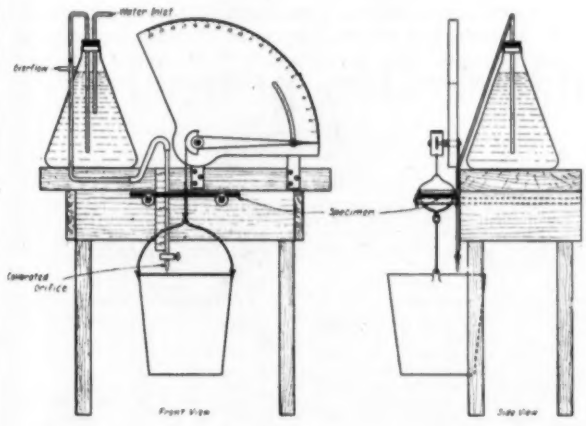

FIG. 1

Apparatus for Testing Fiber Boards in Static Bending.

mains, as in the Forest Products Laboratory set up, frequent checks on the temperature of the water should be made. Slight changes in temperature of the water from day to day do not appreciably affect the results. Changes in temperature from season to season will however introduce an error. This point is dealt with in detail under the subject of the variables affecting the results.

The thickness and width of the sample are accurately measured immediately adjacent to where the break occurred and the pieces are dried to constant weight for the determination of the moisture content[6]. A convenient and easily constructed device for measuring the thickness of the specimen is shown in Fig 2. The three feet are each ¼-inch in diameter. These feet are preferred to a flat surface when measuring material with an uneven or warped surface

The readings of load and deflection are plotted vertically and horizontally, respectively. The elastic limit is the point at which the curve deviates from a straight line. Since zero deflection is plotted for the initial load, the actual deflection at the elastic limit is determined by drawing a straight line through the origin

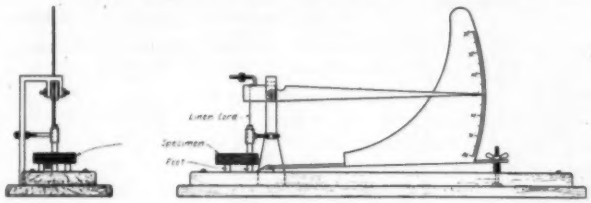

FIG. 2

Gauge for Measuring the Thickness of Fiber Boards.

parallel to the straight line portion of the stress-strain curve. The actual deflection will be found from the point on this parallel line which corresponds to the load at the elastic limit. From the valves obtained the moduli of transverse strength, rupture, and elasticity are calculated. A typical stress strain curve is shown in Fig. 3.

VARIABLES AFFECTING ACCURACY OF RESULTS

The Effect of Rate of Loading

Several tests were made to determine the effect of the rate of loading. Three rates were selected: namely, 1, 2, and 3 pounds per minute. Two sets of boards were used and three samples of each set were tested at each rate. The boards were prepared from commercial spruce ground-wood pulp in the form of disks approximately 0.5-inch in thickness and 9.5-inches in diameter under

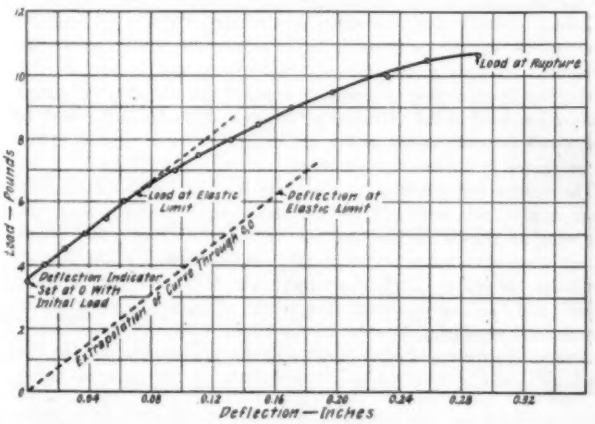

FIG. 3

Typical Stress-Strain Curve of a Ground Wood Pulp Board. Specimen 1.5 in. Wide, 0.265 in. Thick, 6 in. Span. Load Applied at Rate of 1 lb. per Min.

constant conditions of forming, but one set (Sample A) was dried at 50°C. and the other set (Sample B) at 110°C. The results for the modulus of transverse strength are given in Table 1. These data show that the lowest deviation from the average was obtained with the boards dried at the lower temperature and tested at a loading rate of one pound per minute. The next lowest

[6] No data have been obtained that show the relation of moisture content to the strength. The strength is known to vary with the moisure content which in turn varies with humidity, but using a constant humidity for various materials is no guarantee of standard testing conditions as represented by standard moisture content. Therefore the moisture content is recorded and the humidity maintained constant for ease of manipulation. The ideal method would obviously be to vary the humidity to obtain standard moisture content for all tests.

deviation from the average was for boards dried at the higher temperature and tested at a rate of two pounds per minute. The loading rate of three pounds per minute produced results with the highest deviation from the average. It is recognized that the correct loading rate may depend somewhat on the material being tested. The rate of 1 pound per minute has been selected for work at the Forest Products Laboratory because this rate gave the most consistent results.

TABLE 1
THE VARIATION IN THE PROPERTIES OF FIBER BOARD CAUSED BY THE RATE OF APPLYING THE LOAD

	Rate of loading, lbs. per minute	Moisture content, per cent	Solid volume content,[2] per cent	Modulus of transverse strength,[3] lbs. per sq. in.	Modulus of elasticity, lbs. per sq. in.	Modulus of rupture, lbs. per sq. in.
Sample A[1]						
1	1	9.0	14.9	478	43,300	712
2	1	..	...	...	45,800	597
3	1	9.5	17.1	442	46,700	695
4	1	8.5	18.2	470	.....	...
1	2	..	...	...		
2	2	8.4	18.7	432		
3	2	8.6	17.7	534		
4	2	9.2	18.4	477		
1	3	9.5	17.4	426		
2	3	8.4	17.8	625		
3	3	9.5	18.0	515		
4	3	..	...	...		
Sample B[1]						
1	1	11.0	17.0	558	48,500	807
2	1	8.4	18.9	598	49,300	847
3	1	5.2	19.1	698	59,900	...
1	2	7.6	16.2	557		
2	2	6.5	18.3	647		
	2	6.5	17.9	583		
	3	7.0	17.0	471		
2	3	8.2	18.3	475		
3	3	8.2	17.9	594		

[1] Samples A were dried at 50 deg. C. and Samples B at 110 deg. C., otherwise the two sets are identical as regards material and forming conditions.
[2] Calculated as the percentage of the volume of the oven-dry material (specific gravity of the material taken as 1.5) in the total volume of the sample.
[3] The maximum deviation of the transverse strength from the average for loading rates of 1, 2 and 3 pounds per minute was 4.5, 11.0 and 19.7 per cent, respectively.

Although it is not the purpose of this article to discuss the cause of variation in boards of this type, nevertheless, it is pointed out that the test values for the individual boards do not all have a constant relationship with respect to the rate of loading. Since all specimens cut from a single board were of practically the same moisture content and contained nearly the same solid volume content, the variations in modulus of transverse strength must be attributed not only to the rate of loading but, also, in part, to the variations in structure of formation in the board. Several other factors involved in the forming, pressing, and drying of the boards also enter into the result and a discussion of these variables will be presented in a future publication.

The values for modulus of elasticity have been found to vary from 5 to 8 per cent and for the modulus of rupture about 10 per cent as shown in the last two columns of Table 1. These values were obtained on experimental boards formed at the Forest Products Laboratory and hence there are no values for "in machine" and "across machine" directions. Typical data for three commercial insulating boards are given in Table 2. It is noted that there is practically no difference in the values obtained for "in machine" and "across machine" directions in the case of these

TABLE 2
THE MODULI OF TRANSVERSE STRENGTH, ELASTICITY, AND RUPTURE FOR THREE COMMERCIAL INSULATING BOARDS

	Modulus of transverse strength		Modulus of elasticity		Modulus of rupture	
Sample	Across machine direction of the grain, pounds per sq. in.	In machine direction of the grain, pounds per sq. in.	Across machine direction of the grain, pounds per sq. in.	In machine direction of the grain, pounds per sq. in.	Across machine direction of the grain, pounds per sq. in.	In machine direction of the grain, pounds per sq. in.
A	162	183	18,800	21,000	276	282
B	279	278	36,500	36,600	343	374
C	225	225	39,100	39,100	464	464

three insulating boards. This cannot be assumed as being true of all commercial boards of this type but is evidence that the values obtained from experimental boards are indicative of results that may be expected from the material in commercial practice.

Effect of Temperature on Rate of Flow of Water

The flow of liquid through a tube and orifice is affected by a change in temperature because of the changes in viscosity and density. For a given temperature (and a nonturbulent flow) the flow may be expressed by Poiseuille's formula expressed in c. g. s. units

$$R = \frac{3.1416\ r^4 p}{8\ ln}$$

where R is the volume rate of flow, r the radius of the tube, l the length of the tube, n the viscosity, and p the difference in pressure between the two ends of the tube. The value of p depends upon the height of the inlet above the outlet and the density of the liquid and may be expressed: $p = hd$, where h = the height of liquid and d its density. The weight of liquid delivered per unit time, W, is

$$W = RD = \frac{3.1416\ r^4 hd^2}{8ln}$$

However, the change in the density of water within the normal working range of temperatures is comparatively slight and may for practical purposes be omitted from the calculation. Therefore with all conditions except temperature remaining constant the rate of flow may be expressed by

$$R = \frac{k}{n}$$

The constant k may be determined for conditions prevailing at the time of calibration of the orifice and the rate of delivery of water calculated for any other temperature.

The rate of flow of water from a tube, calibrated to deliver one pound per minute at 20°C., is given for various other temperatures in Table 3. It may be noted that a variation of about 4°C. will cause a 10 per cent variation in the weight of water delivered per minute. The rate of loading the sample beam may vary within wider limits than this insofar as the rate of applying the load is concerned. The magnitude of the load at the elastic limit or at the point of rupture will be in appreciable error, however, if the stop watch is used independent of temperature measurements.

The desired rate of delivery (one pound (453 grm.) per minute) may be maintained at all temperatures by changing the height of the water column. This is easily done if the siphon contains a short length of rubber tubing. The formula now becomes:

$$R = \frac{kh}{n}$$

TABLE 3
THE EFFECT OF CHANGES IN TEMPERATURE ON THE RATE OF FLOW OF WATER FROM A TUBE AND ORIFICE CALIBRATED TO DELIVER ONE POUND (NON-TURBULENT FLOW) AT A TEMPERATURE OF 20 DEG. C. AND A HEAD OF 80 CM.

Temperature, deg. C.	Viscosity,[1] dyne-seconds per sq. in.	Density,[2] gms. per cc.	Water delivered per minute		
			cc.	grams	pounds
0	0.01792	0.9991	255	254	..
2	.....	....	...	272	0.6
5	.01519	.9999	303	303	..
7	.....	....	...	317	0.7
10	.01308	.9997	348	348	..
12	.....	....	...	363	0.8
15	.01140	.9991	400	400	..
16	.....	....	...	408	0.9
20	.01005	.9982	455	454	1.0
24	.....	....	...	498	1.1
25	.00894	.9971	510	508	..
29	.....	....	...	544	1.2
30	.00801	.9957	569	566	..
33	.....	....	...	590	1.3
35	.00723	.9941	630	626	..
36	.....	....	...	635	1.4

[1] Bingham and Jackson, 1917.
[2] Smithsonian tables, 1927.

If R= 453, and h and n are the head and viscosity of the water, respectively, at the time of calibrating the tube, the value k, may be expressed by:

$$k = \frac{453n}{h}$$

At any other temperature, in order to maintain R= 453, the

head, h, is changed by a value x, and becomes (h + x). Let n' be the vicosity of the water at any given temperature.

$$\text{Then } R = \frac{453\ (h+x)}{n'} = 453 \quad x = \frac{(n' - n)h}{n}$$

x is the vertical distance the orifice must be moved from the position occupied at the time of calibration. The values of the factor $\frac{(n' - n)}{n}$ at several temperatures for a tube and orifice calibrated to deliver water at a rate of one pound per minute at 20°C. are:

Temperature °C.:	5	10	15	20	25	30
Factor $\frac{n' - n}{n}$:	0.511	0.301	0.134	0	—0.110	0.201

The above formulas need not be computed each time the temperature of the water is found to have changed, since a scale calibrated to read in degrees of temperature is easily made and may be mounted on the table as shown in Fig 1.

Comparison with Standard Testing Methods

It should be noted that the proposed procedure employes a uniform rate of loading. The standard machines used for timber and metal testing are operated at a uniform rate of deflection. It is reasonable to suppose that since load and deflection are related by a straight line function within the elastic limit, no differences are involved. Results by this method were compared with those obtained with a universal testing machine, the load being measured in the latter method by means of a platform beam balance sensitive to 0.01 of a pound. The variations in the two methods were found to be no greater than the variations found in samples cut from the same or duplicate boards.

Precision

The required precision of measurements of the load, deformation, and the dimensions of the specimen is apparent from the following tabulation:

Measurement	Error in measurement	Approximate error in modulus of— Transverse strength per cent	Rupture per cent	Elasticity per cent
Load at elastic limit.....	0.5 pound	7	..	7
Deflection at elastic limit	0.01 inch	..	..	17
Load at rupture	0.5 pound	..	3	..
Thickness of specimen...	0.01 inch	5	5	7
Width of specimen.....	0.05 inch	3	3	3

It is evident from this tabulation that accurate measurements of deflection and load at the elastic limit and of the thickness are important, particularly as they affect the modulus of elasticity.

The results show the proposed method to be sufficiently accurate for the evaluation of the strength of fiber boards and if a certain precision in measurement is maintained, the results may be used in determining the strength of the material in use.

Applications of the Test

The method proposed has been found useful in testin gthe strength of insulating and wall boards, and laminated fiber boards. Its use has been extended to the evaluation of pulps by forming boards from the material under a standard procedure and subsequently obtaining the strength and stiffness moduli. In this connection it has been found valuable in comparing ground-wood pulps and in tracing the development of hydration and strength of glassine pulp in the beater.

Summary

A method has been developed at the Forest Products Laboratory for the evaluation of the strength and stiffness of fiber boards. These properties are determined by a static bending test from which the moduli of transverse strength, rupture, and elasticity are obtained. The results are expressed in terms that evaluate the structural properties of the material and not simply the properties of the piece under test. The values can be regarded with little or none of the qualifying data necessary in the empirical methods applied in mills at the present time. The method is simple and inexpensive and has been shown to be sufficiently accurate for the purpose. It may be applied to boards of a wide variety and is particularly useful in determining the strength of insulating and wall boards. A further application is in the testing of pulps for strength, where it has been found to have a particular value in the evaluation of groundwood pulp.

United States Patents on Papermaking

Third Quarter, 1929

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography

1,719,066. Treatment of plant fibers. Casimir Masse, assignor to Société civile des procédés Masse, Paris, France. Filed Feb. 10, 1927. 4 claims. (Cl. 92-13).

1,719,094. Mechanism for inserting doctor blades. Frederick W. Vickery, assignor to Vickery Limited, Boston, Mass. Filed Dec. 4, 1927. 8 claims. (Cl. 92-74).

1,719,129. Process of fiber liberation and recovery of valuable constituents of the waste liquor. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Oct. 28, 1922. 9 claims. (Cl. 92-11).

1,719,130. Process for recovering heat and chemicals. George A. Richter and Wallace B. Van Arsdel, assignors to Brown Company, Berlin, N. H. Filed Dec. 16, 1925. 5 claims. (Cl. 23-35).

1,719,166. Process of calendering mineral-coated paper and product. Donald B. Bradner, assignor to The Champion Coated Paper Company, Hamilton, Ohio. Filed Jan. 3, 1927. 21 claims. (Cl. 92-68).

1,719,199. Apparatus for printing wall board. John Schumacher, Los Angeles, Calif. Filed Oct. 12, 1925. Renewed May 1, 1929. 3 claims. (Cl. 154-1).

1,719,200. Plaster board. John Schumacher, Los Angeles, Calif. Filed Dec. 4, 1926. 2 claims. (Cl. 72-124).

1,719,344. Guard for paper-winding machines. Forrest A Sutherland, assignor to Great Northern Paper Company, Millinocket, Me. Filed Dec. 5, 1927. 12 claims. (Cl. 74-105).

1,719,421. Apparatus for making paper bottles. Andrew Bodor, assignor to Reinforced Paper Bottle Corporation, New York, N. Y. Filed June 9, 1924. 5 claims. (Cl. 93-39).

1,719,636. Wood-grinding machine. Harry Francis Tyner, Outremont, Quebec, Canada. Filed Oct. 17, 1927. 5 claims. (Cl. 83-75).

1,719,647. Couch roll. Nelson E. Booth, Brooklyn, N. Y. Filed May 19, 1927. 3 claims. (Cl. 92-47).

1,719,712. Gummed paper and process of manufacturing the same. William W. McLaurin, Brookfield, Mass. Filed Sept. 6, 1928. 9 claims. (Cl. 91-68).

1,719,726. Wall board. Harry C. Raynes, assignor to Atlantic Gypsum Products Company, Portsmouth, N. H. Filed Aug. 26, 1926. 3 claims. (Cl. 154-45.9).

1,719,793. Paper-drying machine with roll doctors. John E. Alexander, assignor to Minton Vacuum Dryer Corporation, Greenwich, Conn. Filed July 27, 1923. 14 claims. (Cl. 34-48).

1,719,819. Manufacture of nonplaniform sheets of fibrous material. Morris Koppelman, Brooklyn, N. Y. Filed May 17, 1926. 24 claims. (Cl. 92-56).

JULY 9, 1929

1,719,926. Stencil sheet. Richard Damme, Stettin, Germany. Filed Nov. 12, 1924. 6 claims. (Cl. 41-38.6).

1,719,969. Screen-cleaning device for paper-making machines. Conrade Hector Dupuis, Riverbend, Quebec, Canada. Filed Feb. 21, 1928. 2 claims. (Cl. 92-50).

1,720,243. Method of making stereotype mats. Arlie W. Schorger, assignor to C. F. Burgess Laboratories, Inc., Madison, Wis. Filed Apr. 9, 1927. 10 claims. (Cl. 92-21).

1,720,651. Envelope machine. Joseph M. Townsend, assignor to Townsend Envelope Machine Co., Boston, Mass. Filed June 25, 1925. 13 claims. (Cl. 93-66).

JULY 16, 1929

1,720,715. Mechanism for working fibrous material. Edgar Merritt Bidwell, assignor to Western Electric Company, Incorporated, New York, N. Y. Filed Oct. 15, 1926. 13 claims. (Cl. 92-41).

1,720,716. Manufacture of surfaced paper sheets and boards. George Frederick Blombery, Lane Cove, near Sydney, New South Wales, Australia. Filed Mar. 26, 1926. 4 claims. (Cl. 91-68). The finishing material is rubber latex and kaolin.

1,720,721. Envelope. Frank Culotta, Melrose Park, Ill. Filed Oct. 20, 1926. 1 claim (Cl. 229-85).

1,720,742. Method of burning sulphur and burner therefor. Edwin J. Mullen, assignor to General Chemical Company, New York, N. Y. Filed Nov. 11, 1925. 20 claims. (Cl. 23-179).

1,720,749. Insulating material. George Leroy Schnable, assignor to Western Electric Company, Incorporated, New York, N. Y. Filed June 27, 1925. 6 claims. (Cl. 173-264).

1,720,750. Mechanism for working fibrous material. John Nilsen Selvig, assignor to Western Electric Company, Incorporated, New York, N. Y. Filed Oct. 25, 1926. 13 claims. (Cl. 92-41).

1,720,855. Method and apparatus for making wall board. Caleb Payne, assignor to Gypsum Engineering and Manufacturing Company, Chicago, Ill. Filed Feb. 18, 1924. 10 claims. (Cl. 154-1).

1,720,856. Wall board. Caleb Payne, assignor to Gypsum Engineering and Manufacturing Company, Chicago, Ill. Filed May 10, 1926. 3 claims. (Cl. 154-45.9).

1,720,897. Dry stencil. Henry H. Hawling, Ridgefield Park, N. J. Filed Oct. 21, 1927. 5 claims. (Cl. 41-28.6).

1,721,376. Method of manufacturing cellulose pulp. Joaquin Julio de la Roza, Sr., assignor to Bagasse Products Corporation, New York, N. Y. Filed June 11, 1927. 5 claims. (Cl. 92-9).

1,721,399. Method of manufacture of bags. Ernst Klein, Vengerich in Westfalen, Germany. Filed Feb. 3, 1928. 17 claims. (Cl. 93-35).

1,721,477. Shower pipe for paper or pulp machines. Claude L. Spafford, assigned to Improved Paper Machinery Company, Nashua, N. H. Filed Mar. 8, 1927. 3 claims. (Cl. 299-59).

JULY 23, 1929

1,721,576. Noglare writing paper and process of making same. Wellington George Reynolds, Holyoke, Mass. Filed Mar. 12, 1927. 3 claims. (Cl. 92-21).

1,721,699. Paper machinery. Herman L. Kutter, Hamilton, Ohio. Filed Aug. 29, 1925. 15 claims. (Cl. 92-44). Forming section of Fourdrinier type.

1,721,863. Wood-pulp-grinding plant and the art of operating the same. Friedrich Grössler, assignor to Linke-Hofmann-Werke A. G. Abteilung Fullnerwerk Warmbrunn, Schlesien, Germany. Filed Feb. 9, 1928. 3 claims. (Cl. 83-75).

1,721,972. Apparatus for making wall board. Caleb Payne, assignor to Gypsum Engineering and Manufacturing Co., Chicago, Ill. Filed Aug. 22, 1927. 7 claims. (Cl. 154-1).

1,721,974. Process of making paper out of peat. Charles C. Roth, assignor to Peat Products Company, Westfield, Wis. Filed Apr. 23, 1926. 1 claim. (Cl. 92-3).

1,722,133. Paper holder and rewinder. Benjamin W. Freeman, Cincinnati, Ohio. Filed Apr. 28, 1927. 15 claims. (Cl. 164-93).

JULY 30, 1929

R17,381. Paper machine. Alonzo Aldrich, assignor to Beloit Iron Works, Beloit, Wis. Filed July 11, 1927. Original No. 1,555,593 dated Aug. 10, 1926. 58 claims. (Cl. 92-45).

1,722,395. Apparatus for feeding continuous-working wood grinders and method thereof. Wilhelm Rabus, assignor to American Voith Contact Company, Inc., New York, N. Y. Filed Sept. 3, 1924. 13 claims. (Cl. 83-75).

1,722,422. Carton and its blank. Norman O. Johnson, assignor to Illinois Carton and Label Company, Chicago, Ill. Filed July 14, 1928. 3 claims. (Cl. 229-40).

1,722,431. Process for making waterproof compositions. Lester Kirschbraun, Evanston, Ill. Filed Dec. 31, 1920. 5 claims. (Cl. 92-21).

1,722,432. Apparatus for making paper. Lester Kirschbraun, Chicago, Ill. Filed Mr. 27, 1924. 6 claims. (Cl. 92-42).

1,722,433. Apparatus for making emulsions. Lester Kirschbraun, Chicago, Ill. Filed Mar. 27, 1924. 6 claims. (Cl. 134-1). Material for waterproofing paper.

1,722,434. Process of making felted fibrous compositions. Lester Kirschbraun, Leonia, N. J. Filed Apr. 15, 1927. 5 claims. (Cl. 92-21). A waterproof sheet.

1,722,503. Paper-making method and machine. William H. Millspaugh, Sandusky, Ohio. Filed July 6, 1925. 33 claims. (Cl. 92-38).

1,722,559. Coated-board finishing and cutting apparatus. Charles C. Colbert and George E. Preston, assignor to American Coating Mills, Elkhart, Ind. Filed Feb. 6, 1924. 34 claims. (Cl. 92-71).

1,722,702. Roofing shingle. Lester Kirschbraun and Otto A. Heppes, assignors to the Flintkote Company, Boston, Mass. Filed Aug. 7, 1925. 3 claims. (Cl. 154-51).

1,722,693. Extractor. George Stanford Witham Jr., Hudson Falls, N. Y. Filed Apr. 28, 1927. 20 claims. (Cl. 92-23).

1,722,874 Pulp screen. Harold D. Wells Glens Falls, N. Y. Filed Jan. 13, 1928. 7 claims. (Cl. 92-34).

1,722,905. Driving mechanism for sectional machines. Daniel R. Francis, assignor to The Waterbury Tool Company, Waterbury, Conn. Field May 21, 1928. 5 claims. (Cl. 92-38).

AUGUST 6, 1929

1,722,993. Production of pulp. Linn Bradley Montclair, N. J., and Edward P. McKeefe, Plattsburg, N. Y. Filed Nov. 3, 1921. Renewed Oct. 30, 1928. 10 claims. (Cl. 92-11).

1,723,051. Method of making fiber board. Otto Mantius, New York, N. Y. Filed Mar. 16, 1928. 4 claims. (Cl. 92-39).

1,723,149. Method of an apparatus for forming the blanks for folded blank boxes. John J. Gannon and Frederick W. Foerstner, assignors to The Ohio Boxboard Company, Cleveland, Ohio. Filed Dec. 15, 1926. 16 claims. (Cl. 93-58).

1,723,181. Press for use in paper making. George D. Kilberry, assignor to Downingtown Manufacturing Company, Downingtown, Pa. Filed Mar. 6, 1925. Renewed Jan. 5, 1928. 1 claim. (Cl. 92-53).

1,723,355. Process of making waterproof paper. Lester Kirschbraun, Evanston, Ill. Filed Sept. 10, 1919. 2 claims. (Cl. 92-21).

1,723,361. Manufacture of waterproof fibrous products. Harold L. Levin, assignor to The Flintkote Company, Boston, Mass. Filed Sept. 17, 1928. 10 claims. (Cl. 92-40).

1,723,581. Paper-coating composition. Aaron Ruderman, New York, N. Y. Filed Nov. 6, 1924. 5 claims. (Cl. 134-17).

1,723,747. Method of an apparatus for impregnating fibrous materials with liquids. Edwin S. Pearce, Indianapolis, Ind. Filed Feb. 17, 1925. Renewed Sept. 1, 1927. 28 claims. (Cl. 91-68).

1,723,800. Utilization of sulphite cellulose waste liquor. Wilhelm Michael and Albert Palm, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed Mar. 16, 1928. 10 claims. (Cl. 92-2).

1,723,834. Paper-making machine. Alonzo Aldrich, Beloit, Wis. Filed Oct. 18, 1922. Renewed May 23, 1927. 5 claims. (Cl. 92-45).

AUGUST 13, 1929

1,724,124. Folding mechanism for cartoning machines. Arthur H. Boileau, assignor to Cherry Burrell Corporation, Wilmington, Del.. Filed Mar. 30, 1928. 3 claims. (Cl. 93-6).

1,724,154. Machine for making sheet products. Samuel A. Williams and Thomas C. Pond, assignors to Johns-Manville Corporation, New York, N. Y. Filed Mar. 1, 1927. 7 claims. (Cl. 92-43).

1,724,179. Sealing apparatus for cartons. Adolph D. Bullerjahn, Chicago, Ill. Filed June 17, 1927. 20 claims. (Cl. 91-43).

1,724,421. Production of gas strong in sulphur dioxide. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Mar. 26, 1923. 2 claims. (Cl. 23-178).

1,724,441 Pulping machine. Harry N. Weir, assignor to The Noble and Wood Machine Co., Hoosick Falls, N. Y. Filed Aug. 13, 1928. 5 claims. (Cl. 83-9).

1,724,522 Paper manufacturing. Moisey M. Serebrianoi, Saltykovka, Union of Socialist Soviet Republics, Russia. Filed Sept. 26, 1928. 11 claims. (Cl. 92-21). Pulp is drawn between hot and cold rolls.

1,724,523. Plastic composition. Moisey M. Serebrianoi, Saltykovka, Union of Socialist Soviet Republics, Russia. Filed Sept. 26, 1928. 5 claims. (Cl. 92-3).

1,724,636. Blank paper box of carton. George A. Bell, assignor to Indiana Fibre Products Company, Marion, Ind. Filed July 27, 1928. 2 claims. (Cl. 229-33).

1,724,648. Knockdown paper box. Walter A. Fellowes, Chicago, Ill. Filed Sept. 21, 1923. 2 claims. (Cl. 229-37).

1,724,670. Process for improving artificial fibrous materials Leon Lilienfeld, Vienna, Austria. Filed May 22, 1926. 8 claims. (Cl. 8-20).

1,724,672. Ornamental paper and method of manufacturing same. John MacLaurin, Ware, Mass. Filed Nov. 3, 1925. 8 claims. (Cl. 91-68).

1,724,778 Fibrous materials for odorless containers. John D. Rue, Madison, Wis., Sidney D. Wells, Quincy, Ill., and Francis G. Rawling, Madison, Wis Filed Sept. 13, 1926. 8 claims. (Cl. 92-11). Basis is straw.

AUGUST 20, 1929

1,725,040 Apparatus for molding articles from pulp. Bert R. Williamson, assignor to Fidelity Trust Company, Portland, Maine. Filed Aug. 16, 1926. 7 claims. (Cl. 92-56).

1,725,108. Method and apparatus for making paper. Alvin W. Smith, East Millnocket, Me. Filed Mar. 10, 1926. Renewed May 4, 1928. 20 claims. (Cl. 92-38).

1,725,261. Wall-paper machine. Eugene C. F. Ernst, Pittsburgh, Pa. Filed Feb. 19, 1927 15 claims. (Cl. 91-30).

1,725,335. Insulation material. Harold H. Brown, St Albans, Vt. Filed June 22, 1925. 6 claims. (Cl. 92-3). Fiber of plant leaves of the Bromelia family.

1,725,465. Method of an apparatus for drying pulp articles. George James Manson, Hawkesbury, Ontario, Canada. Filed Dec. 8, 1927. 8 claims. (Cl. 34-16).

1,725,645. Felted waterproof composition and process of making same. Lester Kirschbraun, Chicago, Ill. Filed May 24, 1920. Renewed Nov. 7, 1925. 17 claims. (Cl. 92-21).

1,725,646. Floor covering and process of making same. Lester Kirschbraun, Evanston, Ill. Filed Apr. 18, 1921. Renewed Feb. 4, 1929. 6 claims. (Cl. 92-38).

1,725,647. Felted sheet and process of making same. Lester Kirschbraun, Chicago, Ill. Filed Apr. 20, 1921. 6 claims. (Cl. 92-41).

1,725,598. Impregnated shoe stiffener. Henry Philip Shopneck, Dorchester, Mass. Filed Feb. 14, 1927. 3 claims. (Cl. 92-21).

AUGUST 27, 1929

1,725,764. Apparatus for seasoning and rectifying paper stock. George E. Poggel, assignor to Advance Manufacturing Company, Louisville, Ky. Filed Dec. 17, 1927. 14 claims. (Cl. 34-19).

1,725,818. Process of producing wood pulp. William D. Mount, Lynchburg, Va. Filed Sept. 10, 1925. 5 claims. (Cl. 92-13).

1,726,078. Process for the production of cellulosic material. Carl Leyst, Berlin, Germany. Filed Nov. 11, 1926. 14 claims. (Cl. 92-13).

1,726,134. Combination paper-drier installation. John E. Alexander, Port Edwards, Wis. Filed Jan. 29, 1927. 10 claims. (Cl. 34-48).

1,726,142. Process for improving cellulosic material. Leon De Wolf, Lebbreke. Belgium. Filed Nov. 9, 1925. 2 claims. (Cl. 8-20).

1,726,440. Slice for paper-making machines. Phillip J. Lamoureux, Marinette, Wis. Filed Sept. 1, 1927. 3 claims. (Cl. 92-44).

SEPTEMBER 3, 1929

R17,422. Process for extracting the pure cellulose from the bagasse of sugar cane. Earnest Charles Hemmer Valet, assignor to Celulosa Hemmer Valet, Sociedad Anonima, Mexico. Filed May 22, 1929. Original No. 1,630,147, dated May 24, 1927. 11 claims. (Cl. 92-9).

1,726,655. Envelope-making machine. Charles E. Dammart, Minneapolis, Minn. Filed Oct. 25, 1926. 16 claims. (Cl. 93-61).

1,726,710. Water-feed regulator. Richard Morrison, Great Barrintgon, Mass. Filed Nov. 5, 1928. 5 claims. (Cl. 92-46).

1,726,749. Device for controlling the moisture content of pulp. George E. Mayo, Potsdam, N. Y. Filed Oct. 1, 1928. 15 claims. (Cl. 92-46).

1,726,750. Pulp-feed regulator. George E. Mayo, Potsdam, N. Y. Filed Oct. 1, 1928. 12 claims. (Cl. 92-46).

1,726,756. Process and apparatus for reducing pulp or the like. Lloyd T. Murphy, Franklin, Ohio. Filed Jan. 19, 1927. 8 claims. (Cl. 92-24).

1,726,818. Production of fiber articles. Meyrl M. Frost, Detroit, Mich. Filed July 15, 1927. 5 claims. (Cl. 92-54).

1,726,873. Beating engine. Walter Werner, assignor to The Noble and Wood Machine Co., Hoosick Falls, N. Y. Filed Jan. 20, 1927. 2 claims. (Cl. 92-23).

1,726,874. Extractor for pulping devices. Walter Werner assignor to The Noble and Wood Machine Co., Hoosick Falls, N. Y. Filed Aug. 29, 1928. 5 claims. (Cl. 92-23).

1,726,905. Fibrous product method for making the same. Frank T. Lahey, Akron, Ohio. Filed Oct. 28, 1926. 17 claims. (Cl. 18-50).

1,726,906. Composition of matter. Paul W. Leffland, Dallas, Tex. Filed Dec. 24, 1927. 1 claim. (Cl. 57-1). Seeds and finely ground wood pulp, to be mixed with water and to be applied to a surface.

1,726,973. Fourdrinier paper machine. Alonzo Aldrich and Earl E. Berry, assignors to Beloit Iron Works, Beloit, Wisconsin. Filed May 20, 1927. 19 claims. (Cl. 92-45).

1,727,003. Waterproof paper and process of producing the same. Albert L. Clapp, assignor to Bennett, Incorporated, Boston, Mass. Filed Feb. 23, 1926. 4 claims. (Cl. 92-21).

1,727,162. Multiple wire paper machine. Paul Erkens, Duren, Germany. Filed Jan. 2, 1925. 1 claim. (Cl. 92-39).

SEPTEMBER 10, 1929

1,727,329. Bed plate for beating engines. Albert J. Allison, assignor to Simonds Worden White Company, Dayton, Ohio. Filed Aug. 6, 1925. 1 claim. (Cl. 92-22).

1,727,491. Barking machine. Oresta E. St. John, Gloversville, N. Y. Filed Sept. 16, 1927. 8 claims. (Cl. 144-208).

1,727,722. Deinking solution. William Lewis, Vancouver, British Columbia, Canada. Filed Feb. 27, 1928. 2 claims. (Cl. 92-11). Washing powder, water glass and lye in water.

1,727,912. Document paper. Theodore J. Snyder, assignor to Snyder Document Protection Co., Chicago, Ill. Filed July 13, 1926. 1 claim. (Cl. 91-67.95).

1,727,928. Flow control for flow boxes of paper-making machines. Earl E. Berry, assignor to Beloit Iron Works, Beloit, Wisconsin. Filed July 19, 1926. 17 claims. (Cl. 92-44).

SEPTEMBER 17, 1929

1,728,258. Process for preparing cereal straw fiber for the manufacture of relatively thick fibrous sheets therefrom. Edward S. Sheperd, assignor to Albert D. Stewart, St. Joseph, Mo. Filed Nov. 23, 1928. 6 claims. (Cl. 92-1).

1,728,709. Paper material and hood cover embodying the same. Wilbur L. Wright, assignor to Oswego Falls Corporation, Fulton, N. Y. Filed Jan. 29, 1923. 4 claims. (Cl. 215-38).

SEPTEMBER 24, 1929

1,729,072. Stencil sheet. Shinjiro Horii, Tokyo, Japan. Filed Dec. 31, 1927. 2 claims. (Cl. 41-38.6).

1,729,350. Paper-making machine. Herman L. Kutter, assignor to The Black-Clawson Company, Hamilton, Ohio. Filed Aug. 2, 1926. 8 claims. (Cl. 92-44).

1,729,358. Machine for making fiber tubes. Howard Parker, assignor to Brown Company, Berlin, N. H. Filed July 11, 1924. 6 claims. (Cl. 92-66).

1,729,571. Method of making paper. Rupert B. Daniels, assignor to L. L. Brown Paper Company, Adams, Mass. Filed Oct. 15, 1926. 5 claims. (Cl. 92-39). Control of flow of fiber.

1,729,575. Apparatus for charging cellulose digesters. Per Albert Fresk, Robertsfors, Sweden. Filed Apr. 12, 1926. 4 claims. (Cl. 92-7).

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Value of Cost Conventions*

By C. A. Jasperson[1]

It has been my good fortune to have been connected more or less actively with the Cost Association of the Paper Industry since it was organized shortly after the close of the World War. Since it was organized, either myself or some representative of our company has attended quite regularly all meetings held in many of the principal cities of the East and Middle West, but to the best of my knowledge I do not believe that a convention has been held in Wisconsin, and I am very happy today to be able to welcome you to the good old state of Wisconsin, and particularly so on account of this being the first convention held so near that part of the state where I have put in all my active years in the paper industry.

I welcome you to Wausau and trust that your stay will be profitable to yourselves and the wives who might be here will also enjoy the entertainment provided for them.

As you know, the company with which I am connected, being the Nekoosa-Edwards Paper Company, which company no doubt you are more or less familiar with, is located at Wisconsin Rapids, Port Edwards and Nekoosa, about fifty miles down the Wisconsin River, and I want to invite you to come down to Port Edwards should you have any spare time before you are obliged to go back to your mills, but I do not want you to come to Port Edwards any sooner than Sunday because I would like to see you attend all the meetings to be held here.

We have some very interesting things at Port Edwards and I refer particularly to a lake that we have built. The mill is located on the Wisconsin River. We are up against the proposition of getting clean river water and we have gone across the Wisconsin River, dammed up the Creek and made a beautiful lake out of it, and we are piping this water under the Wisconsin River to our mill. I would like to welcome you to Port Edwards, particularly after this convention is over.

One of Finest Airports in Country

We also have one of the finest airports in the country, and should any one of you come down Sunday I will see that you have a fine ride in some sort of airplane. We have a large trimotor plane of the Curtiss-Robin cabin type and if you have never had a ride in an airplane or you wish a ride, come down and I will see that you have a nice time and nice ride and I will see that you are entertained.

At this time I am not actively engaged in the compiling of costs, though that department is still directly under my supervision and the changes in systems suggested from time to time by employees in that department are adopted only after thoroughly analyzing such suggestions with those employees. I honestly believe our being able to intelligently adopt or reject these suggestions has been made easier from information gathered at these Cost Conventions, not so much perhaps from the splendid papers given, but by the contact we have had with other members in attendance out of meeting hours such discussions taking place wherever we might happen to meet. At one convention I attended, which was held more than 1000 miles from home, the attendance at which entailed considerable time and expense, a very interesting discussion was had in the lobby of the hotel where the convention was held. In fact, we were so interested in our discussion that at two o'clock in the morning the night clerk turned out the light which, of course, we knew was a hint for us to disperse, but, not taking the suggestion seriously, we continued our discussion in the dark for some considerable time thereafter. While perhaps neither side was won over by the other, yet the information I gathered on that subject as to how some companies were handling it, has been of great value to me. That discussion alone well paid me for the time and money spent to attend that particular convention. I am very sorry, indeed, that many executives do not appreciate the knowledge along the lines of cost and correct accounting which can be gained at these meetings, and make a special effort to have those of their organization attend who should have this valuable information.

Less Interest Thirty Years Ago

Thirty years ago many, in fact a large majority of executives, were little interested in costs. One reason I presume was on account of the limited line or small variety of commodities manufactured by them, they, basing their knowledge, to a large extent as to whether or not the business was successful, on the size of their bank balance, very little realizing the fallacy of their conclusion, inasmuch as their bank balance in no way informed them of what the business was actually doing, little thought or study being given to proper charging of expense items, particularly as to whether they were expense or property items, many neglecting to take into consideration the one very important item of depreciation.

With the World War came the Income Tax Law, which of itself necessitated better accounting systems than most manufacturers had at that time, for to ake advanage of depreciation

* Delivered at Convention of the Cost Association of the Paper Industry, Hotel Wausau, Wausau, Wis., on Sept. 19, 1929.
[1] Sec., Nekoosa-Edwards Paper Co.

as an item of expense, it was necessary that this subject be handled intelligently and consistently.

After the World War

After the close of the war competition became very keen. Manufacturers then started making a greater variety of commodities with the same machinery, which fact alone made it important to know costs, not only in a general way, but to know that they were accurate. It was at that time that cost conventions were largely attended, not by dozens, but by hundreds, all anxious to learn more of how to figure true costs. Conventions have been held regularly since, with more or less falling off in attendance due, perhaps, to a large extent that many manufacturers have the idea they now have been able to devise satisfactory cost systems so that the further spending of time and money to attend conventions is no longer necessary. This is certainly a false conclusion to arrive at, as no one is so well versed in costs and correct accounting methods but what much more can be learned and that of great value.

Not being the mayor or even a city official I have not the power nor am I authorized to present you with a key to the city of Wausau, but I am sure if the Mayor knew the Cost Association was holding a convention here, you no doubt would be given officially the free use of the city to enjoy as you saw fit. I might state if you come to Port Edwards, I happen to be the mayor, and we have never been asked to present the key to anybody, but we will try and find some old key down there and you are certainly welcome to the use of our city, particularly you people from some distance who have never been in this part of the country.

However, as one of the past presidents of this Association I do welcome you to Wausau and know you will be well paid for the effort and time spent in coming here and hearing the program which I note has many papers of interest to all accountants.

Use Of Standards In Paper Mill Accounting*

By Charles O. Passmore, C. P. A.[1]

One of the most gratifying trends in business management, certainly from the standpoint of the public accountant, is the recognition of the use of costs and expense standards as instruments of executive control. Very few of us need look back further than during our own experience to visualize the change of importance and responsibility that has been placed on the Accounting Department. We will all remember well that accounting was considered only as a function to satisfy certain requirements of income tax, the extension of credit, and the duty of getting out the monthly statement of customers' accounts.

We are now somewhat proud when we witness the use the heads of the larger business enterprises are making of the information available in the Accounting Department. I suppose it has been extremely gratifying to the plant accountant or comptroller to be called into the President's office to discuss certain business conditions as evidenced by the reports the accountant has furnished him. We public accountants are still waiting patiently for the time when all clients will carefully read the audit report beyond the words "we certify."

Accountant at Fault

I am not so sure that this failure on the part of the executives to use the reports of their accountants as instruments of executive control has been entirely the fault of the executive. In probably as many instances the accountant is at fault; first, because he has delayed his monthly closing until it is impossible to complete his statement before the 20th of the succeeding month rather than the sixth or seventh; second, because the accountant has not seen to it that his reports and statements are of such a set-up as to be understood by the executive beyond some such general items as current assets or net profit. We must admit that there remains a large number of accountants who insist that their books cannot be closed until the last item of expense for the current month has been properly vouchered and the various expenses pro-rated and reprorated until they are hardly recognizable. Do not misunderstand me, I realize that the accountant must be accurate and pains taking, but I do earnestly advocate the early closing of the monthly accounts at the possible sacrifice of certain minor items of distribution. The results of operation can be shown clearly through the use of standards on major items of expense together with the use of controlling accounts. Detail distribution can follow the summary statement and I believe that this type of reporting is effective on the minds of the executives. The executive is primarily interested in the net results for the month. This can be shown to him on the first statement in summary form. The detail statements of expenses and sales analyses can follow along to the executive a week or two later.

Let me repeat here, that we all realize the fact that business executives have come to appreciate the value of careful and constructive accounting. The development of this confidence has been made possible through the use of comparatives in the analysis and control of accounts. This development is significant in many respects. Certainly one significant factor in bringing the executive and the accountant to an understanding of each other is the classification of accounts. I do not mean the names of the accounts, but rather the purpose and use of the accounts.

Men Controlled Through Use of Accounts

We recognize the fact that management is largely a matter of the control of men. We control men through the use of accounts. I bring this point out as I want to advocate the use of only those accounts which control the operations of certain specific men. In setting standards for expense control it would be of little value to charge items of prorated expense to individuals if these individuals have no control over these expenses.

The determination of the expense standards is a matter of considerable importance as the value of the standard lies in its use as a comparative with actual results. It is also important that the standards include all items of expense or disbursements as due the accounts used in comparison. Analysis of expense accounts is important and no executive can intelligently read expenses or standards unless he has a thorough understanding of the items the accountant is charging or crediting to the accounts. I cannot emphasize this point too strongly and do advocate a periodic review of account classification with the management heads. Certainly a marked distinction between a good executive and a poor executive lies in his understanding of the meaning of the financial reports.

Of course, we have the sales manager who can increase sales from year to year but forgets to apply the standard of selling expense to sales and produces an unprofitable increase in volume. We have, too, the sales manager who can control expenses rather than sales. Occasionally, we find the sales manager who can control volume as well as cost. We expect to see this type of sales manager advance to the head of the organization as chief executive. In the same manner we expect to see the accountant who has the treasurer's point of view advance to the office of controller or treasurer.

Use of Comparatives Has Dangers

The use of comparatives has many dangers and is oft times misleading and in certain cases semi-fradulent. I refer primarily

* Delivered at Convention of the Cost Association of the Paper Industry, Wausau, Wis., on Sept. 19, 1929.

[1] Frazer & Torbet, Chicago and Milwaukee.

to the comparatives based on calendar years, that is, comparing the profits and expenses of this year with those of last year or for a period of years. The comparison of calendar years is a safe comparison only when like conditions have prevailed during the periods under review. We note this use, almost misuse, of comparatives especially by bankers in their bond circulars and stock listings. One year may be exceptional because of certain economic conditions or through the addition of new lines, or new machines or certain improvements or, on the other hand, money may be easier during one year and the bank credit has been extended so that working capital is no problem. It is easier to imagine two years of un-like conditions than two years of anything near like conditions. The comparison of expenses of this year with last year is erroneous from the statistical point of view. To be of any value, the comparative must be expressed in a percentage or ratio. Then, too, the use of ratios can easily be spoiled unless volume and standards are injected. The ratio alone tends to cause the executive to forget the element of quantity. Calendar year comparatives of quantities and ratios, without standards, are misleading in that the changing operating conditions have not been written into the picture. Comparative ratios are of little value where a material change has taken place in either economic or business conditions.

Answer in the Budget Figures

The answer lies in the use of budget figures and the comparison of budget or standard figures with actual figures. I do not suggest the elimination of comparatives expressed in quantities and ratios but I do advocate the addition of the more vital comparison, a comparison of a standard based on the known economic and business conditions with actual results.

The use of budgeted figures has been advocated and applied for years. The fundamentals of the budget are: first, the development of a plan of operation, and second, the execution of the plan.

The development of the plan of operation involves not only a study of past operations but a somewhat careful study of present operating and financial requirements. The first step in establishing a budget is the determination of the desired profit. From this point on the definite budgets and standards are set affecting sales, production, administration and finance.

There are a certain number of expenditures in the field of estimates that can be reduced to a scientific statement. One can tell on the first part of the year what the capital costs are going to be. Capital costs include such items as interest, dividends, sinking funds and bond charges. Depreciation and taxes are known as a definite item. Contrary, perhaps, to the thought of many, maintenance is determinable as a constant and recurring item. Maintenance may be deferred from a busy period to a slack period or from winter to summer, yet maintenance must go on or the property rapidly decreases in its value. Much of the administrative expense is known as a constant item and will be there as long as the business operates. Payrolls must be paid and they can be set up if one is willing to face the music and show the board of directors what monies are needed for personnel.

Often Delayed Until Last

This part of the budget is often delayed to the last as it frequently appears to be the hardest to fix. The accountant must schedule salaries chargeable to the account and have the proper executive approve these accounts. Departments heads are naturally more saving in the employment of personnel when they have to approve the payroll showing very clearly its ratio to their department standard.

I remember a few years back when we were installing budgetary control for one of the largest packing houses in the country. Our first definite budget was the payroll budget. Our first letter to branch managers requested, among other things, a summary statement of savings to be effective in payroll for the coming year. The replies showed an average estimated reduction of 10 per cent. They were then asked to prepare their payroll estimates on forms provided by the budget department. To do this it was necessary for the branch managers to set down by classification the payroll for a twelve month period. When these payroll estimates were summarized the result showed an estimated increase of 15 per cent instead of decrease of 10 per cent. The estimates were returned and the managers instructed to revise them so far as to meet their original estimate of 10 per cent reduction. This brought out very clearly to me the difference between mental budgets and actual budgets made out in scientific order. One must overcome the fear of payroll budgets and face the facts by setting up a standard in writing.

In Connection with Advertising

Perhaps one of the first uses of expense standards or budget comparisons was in connection with advertising. Executives have found that little is gained in comparing advertising expense of this year with last year. A certain degree of satisfaction is gained in comparing the ratio of advertising to the sales this year with last year. The demand for advertising runs in cycles and does not fit into calendar year bases. As a natural result the executive turns to the use of standards or forecasts of the amount of advertising expense they should have as a basis of comparison with the amount actually expended. It can readily be seen that this standard or forecast is premised upon the known facts of advertising expense and sales for the last year and an estimate of sales for the current year. Advertising standard is, therefore, a piece of composite reasoning and furnishes a basis for constructive comparison with actual expense.

A further extension of the use of standards has been found in setting up shop expense standards or budgets or factors to compare with actual shop expense accounts.

The standard shop expense factor has long been used by leading manufacturing experts of the country. Unfortunately, this practice has not come into general use by all manufacturers. I believe, however, that I am safe in saying that, in this day of keen competition where mill costs play such a vital part in management control, the use of shop standards will be adopted by all sound manufacturing concerns.

It is interesting to discuss the setting up of expense standards and to point out their advantages. We realize, however, that unless the standards are used as a comparative to point out deviations from the normal expectancy they are of little value.

There is no account in the expense classification of your industry for which you cannot set up a standard or budget or forecast, as you may choose to call it.

Procedure in Setting Up Expense Budget

The procedure in setting up an expense budget is of great importance. The accountant should calculate the expense account standard and a responsible executive in charge of such expense account should amend and modify the accountant's classification, subject, of course, to the final decision resting in the hands of the chief executive. Such a procedure leads first to the accountant's analyzing past accounts and the study of such analyses by the executive responsible for maintaining the standards. Second, the use of the standard brings out the executive's willingness to promise certain results, and then put up a battle to make good.

Having set up the standards for the given period, we have, in effect, set up a set of comparatives that we intend to use in studying the actual expense accounts for the period given.

In closing, let me enumerate my conclusions on three phases of technical developments in the use of accounts for expense control.

The first advancement has been the growing recognition that costs and cost analyses are of vital importance to the management as instruments of control.

Th second advancement lies in the use of comparatives as a basis of selecting individual accounts for analysis and executive treatment. Let me emphasize the fact that comparatives lead to the analysis of individual accounts, since the deviation from

the standard is automatically called to the attention of the executive. The cause of the deviation is what needs the attention of the executive and not the comparison.

Fallacies in Calender Comparisons

The third technical advancement lies in the setting up of budgets of standards so that comparatives may escape the fallacies inherent in calendar comparisons.

The fear we accountants have in the present generalizations about economy, efficiency and expense control is that the term "expense budget" will lose its significance through just such generalization. Also the fear that executives will lose confidence in the value of standards through their inability to understand the technique of setting up standards.

How many times has the story been told about the Swede, who as a helper in a round house, had ambition to become an engineer. A friendly Engineer became interested in Ole and tried to impress upon him, among other thing, the necessity for being saving in the use of oil and waste. After months of such teaching, the engineer thought he would question the helper and see how he was progressing. He said, "Ole, if you were driving this engine pulling a train of passenger cars at a rate of sixty miles per hour and suddenly you saw before you engine No. 2 coming directly at you and on the same track, what would you do?" Ole thought a moment, and said, "Why I would grab the oil can, the waste and jump."

The Duty of Each Accountant

It is unquestionably our duty as accountants to keep the budget idea before the executive in its true meaning. We must not let it get into such generalizations as have the terms economy and efficiency. Perhaps we should abandon the term to the politician and substitute the term "cost control" to mean very definitely one thing, that is, the use of standards properly calculated, as comparatives with actual accounts as a basis for the selection of specific expense accounts for analysis and the direction of proper executive attention to individual expense items.

Compensation Court Makes Awards

[FROM OUR REGULAR CORRESPONDENT]

CANTON, N. Y., October 21, 1929.—A number of injured paper mill workers are beneficiaries under the decision of Referee Richardson at hearings held during the past week in compensation court. Edward Russell, of Brownville, who was injured in January, 1929, while working for the Harmon Paper Company, was granted an award of $481.55 for loss of the use of his left leg. He was injured when a bag of sulphite weighing several hundred pounds fell on him and the case was carried by the Standard Accident Insurance Company. An award of $165 was granted to Nellis L. Baum, who suffered an injury to his back last July while working for the Ontario Specialties Corporation, at Watertown. The injury affected him so that he is unable to do any work requiring heavy lifting. E. Bradway, an employee of Knowlton Brothers, Watertown, will probably receive an award at the next hearing for loss of the use of an arm. Dr. W. S. Cook, state examining physician, examined the claimant and made the recommendation for 40 per cent loss of the use of arm.

Notes on the Kelvin Bridge

Published by the Leeds & Northrup Company, manufacturers of electrical instruments, of 4901 Stenton Avenue, Philadelphia, Pa., a new notebook entitled "Notes on the Kelvin Bridge," will be invaluable to the paper mills. The booklet contains many interesting illustrations and diagrams. Chapters are devoted to: The Purpose of the Kelvin Bridge, Requirements for Low Resistance Measurement, Kelvin Bridge Theory, Standard Kelvin Bridge, Kelvin Bridge Accessories, Hoopes Conductivity Bridge, Self-Contained Kelvin Bridge, Students Kelvin Bridge, Portable Kelvin Bridges, and Kelvin Bridge Temperature Recorders.

Box Board Production for August

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 9, 1929.—August production of box board, based on reports to the Department of Commerce by 97 firms operating 124 plants (reports for earlier months including five concerns now out of business) was 82.6 per cent of capacity, as compared with 76.9 per cent in July and 77.7 per cent in August, 1928. In the following table the capacity data vary according to the normal number of working days in each month:

Year and Month	Operation: Inch hours Capacity	Operation: Inch hours Operated	Operation: Per cent of Capacity	Production: Short Tons Capacity	Production: Short Tons Output	Production: Per cent of Capacity	New Orders (Short Tons)	Unfilled Orders (end of month) (Short Tons)
1928								
Jan.	10,372,900	7,833,458	75.5	273,125	203,882	74.6	204,128	80,417
Feb.	10,372,900	8,136,737	78.4	273,125	211,862	77.6	215,333	85,862
March	11,312,244	8,843,542	78.2	297,108	227,344	76.5	244,871	93,380
April	10,474,300	8,311,710	79.4	275,100	221,079	80.4	211,304	84,513
May	10,893,272	8,733,965	80.2	286,104	242,394	84.7	224,366	73,157
June	10,893,272	8,199,515	75.3	286,104	228,646	79.9	228,252	77,782
July	10,474,300	7,992,170	76.3	275,100	201,153	73.1	209,976	79,492
Aug.	11,312,244	9,236,068	81.6	297,108	230,750	77.7	236,682	81,816
Total (8 mos.)	86,105,432	67,287,165	78.1	2,262,874	1,767,110	78.1	1,774,912	.....
1929								
Jan.	11,417,328	9,297,029	81.4	307,268	248,290	80.8	241,086	87,974
Feb.	10,539,072	8,435,967	80.0	283,632	228,034	80.4	227,595	87,726
March	11,417,328	9,416,990	82.5	307,268	256,118	83.4	266,895	96,209
April	11,417,328	9,278,701	81.3	307,268	251,147	81.7	250,366	98,162
May	11,417,328	9,526,063	83.4	307,268	264,830	86.2	240,395	89,485
June	10,978,200	*9,170,955	*83.5	295,450	*241,028	*81.6	*231,230	81,880
July	11,417,328	*9,045,362	*79.2	307,268	*236,377	*76.9	*240,617	*88,275
Aug.	11,856,456	9,557,674	80.6	319,086	263,542	82.6	256,537	83,048
Total (8 mos.)	90,460,368	73,728,731	81.5	2,434,508	1,989,366	81.7	1,954,721	.....

Year and Month	Shipments of boxboard (Short Tons)	Stocks of boxboard, end of month (Short Tons)	Consumption of waste paper: Capacity (Short Tons)	Consumption of waste paper: Consumed (Short Tons)	Per cent of Capacity	Stocks of waste paper end of month: At plants (Short Tons)	Stocks of waste paper end of month: In transit and unshipped purchases (Short Tons)
1928							
January	196,984	49,032	255,225	189,744	74.3	153,747	62,181
February	209,477	50,350	255,225	193,966	76.0	140,104	60,038
March	237,621	40,439	276,966	209,649	75.7	139,255	47,322
April	220,315	40,319	256,450	211,898	82.6	132,621	47,551
May	235,794	49,107	266,708	220,750	82.8	127,217	46,375
June	223,901	53,560	266,708	204,468	76.7	130,484	43,480
July	203,741	49,969	256,450	190,810	74.4	132,265	62,056
August	253,104	47,709	276,966	213,626	77.1	117,009	48,108
Total (8 mos.)	1,760,937	.....	2,110,698	1,634,911	77.5	.....	.....
1929							
January	247,498	56,804	297,440	238,652	80.2	137,251	49,104
February	227,206	57,398	274,560	217,442	79.2	126,212	54,121
March	258,604	54,982	297,440	242,073	81.4	137,008	51,520
April	247,773	57,881	297,440	231,089	77.7	142,666	68,005
May	260,283	62,311	297,440	248,813	83.7	150,048	54,431
June	*235,865	*62,384	286,000	*234,119	*81.9	*159,005	56,904
July	*235,863	*63,333	297,778	*215,537	*72.4	*175,306	*64,359
August	262,297	61,924	309,231	255,194	82.5	171,316	61,741
Total (8 mos.)	1,975,389	.....	2,357,329	1,882,919	79.9	.....	.....

* Revised.

Racquette River To Get Russian Pulpwood

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., October 12, 1929.—A huge shipment of pulpwood from Russia consigned to the Racquette River Paper Company is expected here within a few days and the entire cargo will amount to several thousand cords. The consignment will be landed at Quebec prior to being shipped to the local plant by rail. It was announced that the paper company recently received a trial shipment of Russian pulpwood from the same source which proved entirely satisfactory and incidentally resulted in the placing of this latest order.

Several thousand cords of pulpwood and around a million feet of hemlock will be floated down the river next spring in conjunction with the annual drive to the plant of the Racquette River Paper Company. The drive in the spring will be considerably larger than that of 1929 and the contract has been awarded to the Sisson-White Company which has just completed leveling of a large tract on the Granshue section. With the coming of winter the wood will be placed in the river near Higley and all preparations made for the annual drive. The pulpwood will later be driven to the booms of the paper company north of this place.

PAPER DEFINITIONS

CLASSIFICATION and DEFINITION of PAPER TERMS

By F. A. Curtis and Clarence J. West

The first Dictionary of Paper Terms ever compiled in this form and the only work of its kind available.

1460 PAPER TERMS

Drawn up by the Sectional Committee on Definitions

THIS BOOK should be in the hands of every paper manufacturer, every paper merchant, exporter, importer, every converter and every buyer of paper, as well as every producer of materials used in paper manufacture.

CONTENTS

In this list of definitions has been included, as far as possible—

(a) The basic paper terms used in the classification (identified by the classification numbers).

(b) The various commercial papers, the names of which have, in most instances, grown out of special uses to which the papers have been put.

(c) Various converted articles made from paper.

(d) Standard sizes of papers.

(e) Special finishes of papers.

(f) Miscellaneous paper terms.

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Obituary

Fred H. Fuller

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., October 19, 1929.—Word was received here this week of the death in Vancouver, Wash., of Fred H. Fuller, formerly a resident of this place and superintendent of the Carthage Tissue Mills for a long period. He was 65 years old and had made his home in Vancouver for the past several years during which time he was associated with the Columbia River Paper Company. He was the inventor of a number of paper and pulp processes besides being considered an authority in the paper making business. For a number of years he resided in this section during which time he served as superintendent of mills at Potsdam, Newton Falls, and Carthage.

From 1915 to 1918 he was connected with the Carthage Tissue Mills. In 1921 he left this section to take charge of a tissue mill at Franklin, Ohio, where he operated his first paper machine in 1891. Later he returned to this section but in 1923 he was named superintendent of a new mill erected by the Kalamazoo Parchment Company, at Kalamazoo, Mich. In 1924 he accepted the position as superintendent of the Columbia River Paper Mill shortly after it was opened in Vancouver. In 1925 he was made vice president and general manager of the Lewis River Pulp and Paper Company, at Portland. His wife, a son, and two daughters, are the survivors.

Mrs. Julia Graustein

BOSTON, Mass., October 21, 1929.—Mrs. Julia Graustein, mother of Archibald R. Graustein of New York, president of the International Paper and Power Company, and wife of Adolf H. Graustein, died last week at her home, 19 Arlington street, Cambridge, at the age of seventy-two.

Besides her husband and son, Archibald, she leaves two other sons, William C. Graustein of 32 Shepard street, Cambridge, assistant professor of mathematics at Harvard; Edward A. Graustein of Medford, an engineer; three daughters, Mrs. David R. Merrill of Long Beach, Cal.; Mrs. M. E. Wild of 43 Linnaean street, Cambridge, and Miss Jeanette Graustein, who lives at home, and two sisters, Mrs. Joseph Clough of Cambridge, and Mrs. Taffey Mauch of Watertown.

Mrs. Graustein, who before her marriage as Miss Julia Casper, was born in Boston but moved to Cambridge with her family at an early age. The house at 19 Arlington street has been the Graustein residence since 1897.

Mrs. Edson R. Lyman

SHELDON SPRINGS, Vt., October 21, 1929.—Grace Ramage Lyman, wife of E. R. Lyman, secretary of the Missisquoi Pulp and Paper Company, died at her home in Sheldon Springs, Vt., Sunday evening, October 13. Mrs. Lyman was formerly of Holyoke, Mass., and was the youngest daughter of the late James and Adelaide Ramage. Mr. Ramage was owner and president of the James Ramage Paper Company at Monroe Bridge and Franklin Paper Company of Holyoke.

Besides her husband, Mrs. Lyman is survived by two daughters, Dorothy and Janet; two sisters, Mrs. Adelaide Ramage, of Northampton and Mrs. George Watson, of Holyoke; and two brothers, Robert A. Ramage, president of the Franklin Paper Company, and Theodore R. Ramage, secretary of the Franklin Paper Company.

J. H. McLaughlin

APPLETON, Wis., October 21, 1929.—Announcement is made of the death of John Henry McLaughlin, who for many years was superintendent of the Marinette and Menominee Paper Company, Marinette, Wis. His death occurred at Marinette at the age of 75. Mr. McLaughlin was called the "dean of paper makers," because he was reputed to be the first man to make writing paper in any mill west of the Allegheny mountains.

To Handle Hymac Bull Screen in U. S.

The Green Bay Foundry and Machine Works, Green Bay, Wis., have arranged with the Hydraulic Machinery Company, Ltd., Montreal, Que., for the manufacture and sales rights of the "Hymac" Bull Screen (patented) in the United States. This screen handles from 100 to 250 tons of air dry ground wood in

HYMAC BULL SCREEN

24 hours according to the size of perforating. It has a lower horsepower consumption, and is being installed in some of the largest mills. It is equipped with strong shower for cleaning plates.

New Book on Cutler-Hammer Sectional Drive

"Keeping Paper on the Reel" is the title of the new book issued by Cutler-Hammer, Inc., Milwaukee, Wis., describing the C-H (Harland) Sectional Paper Machine Drive.

The book contains many photographs showing installations of this Electric Drive on various types of paper making machines. Especially noteworthy are two time exposures which show the "draw" between sections of newsprint machines while both machines ran at high speed.

In addition the book thoroughly explains the detail construction and the operating principle of the C-H Sectional Drive in non-technical language.

Considerable care has apparently gone into the making of this new book and it should prove a valuable addition to every paper mill's library. A copy will be sent free, upon request to Cutler-Hammer, Inc., 187-12th Street, Milwaukee, Wis.

Steam Pressures for Industrial Plants

The trend toward higher steam pressures in industrial plants has opened up an entirely new field with great economic possibilities for plants that require steam for both power and process work. An article by W. H. Shoudy entitled "Steam Pressures for Industrial Plants Determined by Rational Factors," discusses this question in a very practical manner. Mr. Shoudy analyzes the subject thoroughly and reaches definite conclusions. The charts included in this article will be very helpful to engineers who are considering the possibilities of adopting a high pressure cycle.

Reprints of this article may be obtained from the Combustion Corporation, 200 Madison avenue, New York.

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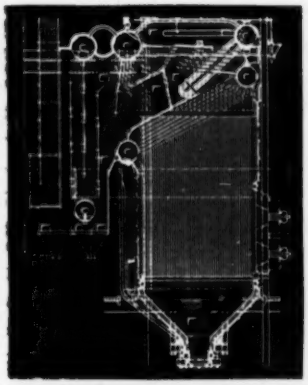

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Imports of Paper and Paper Stock

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NEW YORK IMPORTS

WEEK ENDING OCTOBER 19, 1929

SUMMARY

Cigarette paper .....322 cs.
Wall paper .....19 bls., 26 cs.
Paper hangings .....28 bls., 17 cs.
News print paper .....2,224 rolls
Printing paper .....97 rolls, 11 bls., 54 cs.
Packing paper .....136 cs.
Wrapping paper .....118 cs.
Drawing paper .....46 cs.
Filter paper .....4 cs.
Painted paper .....18 pkgs., 2 cs.
Writing paper .....41 cs.
Surface coated paper .....100 cs.
Raw tissue paper .....28 cs.
Condenser tissue paper .....24 cs.
Tissue paper .....70 cs.
Decalcomania paper .....18 cs.
Colored paper .....3 bls., 11 cs.
Fancy paper .....4 cs.
Wafer paper .....17 cs.
Stencil paper and ink.....70 cs.
Cover paper .....34 cs.
Transparent greaseproof paper .....38 cs.
Tracing paper .....1 cs.
Straw boards .....162 rolls, 80 bls.
Miscellaneous paper ....242 rolls, 124 bls., 163 cs.

CIGARETTE PAPER

Standard Products Corp., Ile de France, Havre, 124 cs.
Standard Products Corp., Homeric, Southampton, 29 cs.
Liggett & Myers Tobacco Co., Homeric, Southampton, 27 cs.
British American Tobacco Co., Aquitania, Southampton, 14 cs.
P. J. Schweitzer, Pres. Van Buren, Marseilles, 128 cs.

WALL PAPER

Irving Trust Co., Deutschland, Hamburg, 13 cs.
Bendix Paper Co., Deutschland, Hamburg, 12 cs.
R. F. Downing & Co., Deutschland, Hamburg, 1 ble.
F. J. Emmerich, Baltic, Liverpool, 9 bls.
A. C. Dodman, Jr., Inc., Baltic, Liverpool, 1 ble.
A. C. Dodman, Jr., Inc., Homeric, Southampton, 1 cs.
A. C. Dodman, Jr., Inc., Aquitania, Southampton, 7 bls.
G. W. Sheldon & Co., Aquitania, Southampton, 1 ble.

PAPER HANGINGS

W. H. S. Lloyd & Co., Baltic, Liverpool, 3 bls.
W. H. S. Lloyd & Co., Minnekahda, London, 7 bls., 1 cs.
A. C. Dodman, Jr., Inc., Laconia, Liverpool, 28 bls.
S. Stern Stoner Co., Ile de France, Havre, 3 cs.
Whiting & Patterson Co., Inc., Homeric, Southampton, 3 cs.

NEWS PRINT PAPER

Perkins, Goodwin & Co., Deutschland, Hamburg, 427 rolls.
Perkins, Goodwin & Co., Westphalia, Hamburg, 100 rolls.
Parsons & Whittemore, Inc., Stuttgart, Bremen, 520 rolls.
Hudson Trading Co., Tai Ping Yang, Ortviken, 297 rolls.
Journal of Commerce, Ragnhildsholm, Kotka, 66 rolls.
H. Reeve Angel & Co., Inc., Ragnhildsholm, Kotka, 616 rolls.
Stora Kopparberg Corp., Gripsholm, Gothenburg, 198 rolls.

PRINTING PAPER

E. Dietzgen & Co., Veendam, Rotterdam, 31 cs.
Keuffel & Esser Co., Deutschland, Hamburg, 97 rolls.
Acme Letter File Co., Saturnia, Trieste, 6 cs.
C. Steiner, Stuttgart, Bremen, 4 cs.
W. A. Foster & Co., Caledonia, Glasgow, 11 bls.
Globe Shipping Co., Sac City, Rotterdam, 13 cs.

PACKING PAPER

F. C. Strype, Veendam, Rotterdam, 20 cs.
M. Harrison Co., Deutschland, Hamburg, 58 cs.
American Express Co., Deutschland, Hamburg, 58 cs.

WRAPPING PAPER

Sylvania Industrial Corp., Belgenland, Antwerp, 110 cs.
Stelz Bookkeeping Co., Belgenland, Antwerp, 8 cs.

DRAWING PAPER

Keuffel & Eser Co., Deutschland, Hamburg, 46 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Lancastria, Southampton, 4 cs.

PAINTED PAPER

——, Ile de France, Havre, 18 pkgs., 2 cs.

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Distinctive Writing Paper Co., Aquitania, Southampton, 2 cs.
F. C. Gerlach, Aquitania, Southampton, 1 cs.
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Canson & Montgolfier, Ile de France, Havre, 10 cs.
J. D. Smith & Co., Ile de France, Havre, 1 cs.
W. J. Byrnes & Co., Ile de France, Havre, 3 cs.
Guibout Freres, Ile de France, Havre, 8 cs.
The Eleto Co., Ile de France, Havre, 5 cs.
Globe Shipping Co., Ile de France, Havre, 4 cs.

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——, Deutschland, Hamburg, 24 cs.
Gevaert Co. of America, Belgenland, Antwerp, 73 cs.

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CONDENSER TISSUE PAPER

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TISSUE PAPER

Old Master Paper & Pulp Co., Deutschland, Hamburg, 57 cs.
G. W. Sheldon & Co., American Banker, London, 2 cs.
F. C. Strype, Laconia, Liverpool, 5 cs.
W. J. Byrnes & Co., Homeric, Southampton, 3 cs.
J. Marks, Chile Maru, Hamburg, 3 cs.

DECALCOMANIA PAPER

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L. A. Consmiller, Deutschland, Hamburg, 5 cs.
B. F. Drakenfeld & Co., Baltic, Liverpool, 10 cs. (duplex).

COLORED PAPER

Borden Riley Paper Co., Belgenland, Antwerp, 11 cs.
E. Henningson & Co., Stuttgart, Bremen, 3 bls., 1 cs.

FANCY PAPER

Hensel, Bruckman & Lorbacher, Ile de France, Havre, 4 cs.

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STENCIL PAPER AND INK

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TRANSPARENT GREASEPROOF PAPER

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D. S. Walton & Co., Gripsholm, Gothenburg, 242 rolls.
F. C. Strype, Sac City, Rotterdam, 4 cs.
Keller Dorian Paper Co., Ile de France, Havre, 44 cs.
Japan Paper Co., Ile de France, Havre, 5 cs.
P. J. Schweitzer, Ile de France, Havre, 8 cs.
Distinctive Writing Paper Co., Ile de France, Havre, 4 cs.
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Mercer Graded Stock Co., Veendam, Rotterdam, 20 bls. rags.
W. Schall & Co., Deutschland, Hamburg, 52 bls. rags.
Chemical Bank & Trust Co., Deutschland, Hamburg, 40 bls. strings.
C. R. Spence, N. Y. City, Bristol, 111 bls. rags.
Jaffe Products Co., Sud Atlantico, Havana, 24 bls. rags.
H. Schimmel, Cold Harbor, Manchester, 100 bls. cotton waste.
Leigh Textile Co., Cold Harbor, Manchester, 37 bls. cotton waste.
Irving Trust Co., Cold Harbor, Manchester, 115 bls. paper stock.
Castle & Overton, Inc., Cold Harbor, Manchester, 43 bls. rags.
J. Cohen & Son, Cold Harbor, Manchester, 24 bls. rags.
Flintkote Co., Cold Harbor, Manchester, 168 bls. rags.
Darmstadt, Scott & Courtney, Cold Harbor, Manchester, 35 bls. rags.
Cordingley & Co., Collamer, Havre, 8 bls. rags.
Darmstadt, Scott & Courtney, Collamer, Dunkirk, 44 bls. rags.
Brown Bros. & Co., Caledonia, Glasgow, 103 bls. paper stock.
Castle & Overton, Inc., Caledonia, Glasgow, 211 bls. flax waste.
Manufacturers Trust Co., Fred. VIII, Copenhagen, 11 bls. rags.
Equitable Trust Co., Fred. VIII, Copenhagen, 111 bls. rags.
Cohen & Son, Laconia, Liverpool, 49 bls. rags.
A. W. Fenton, Inc., Sac City, Rotterdam, 54 bls. cotton waste.
Castle & Overton, Inc., Sac City, Rotterdam, 525 bls. bagging.
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Overton & Co., Sac City, Rotterdam, 362 bls. bagging.
T. D. Downing & Co., London Corporation, Dundee, 30 bls. paper stock.
J. Cohen & Son, London Corporation, Dundee, 41 bls. paper stock.
Castle & Overton, Inc., London Corporation, London, 93 bls. bagging.
Castle & Overton, Inc., Sinaia, Alexandria, 346 bls. rags.
Castle & Overton, Inc., Chile Maru, Hamburg, 50 bls. rags.
Chase National Bank, Chile Maru, Hamburg, 4 bls. rags.
Equitable Trust Co., Chile Maru, Hamburg, 30 bls. rags.
Castle & Overton, Inc., E. Luckenbach, Japan, 73 bls. wipers.
Castle & Overton, Inc., Westphalia, Hamburg, 13 bls. rags.
Castle & Overton, Inc., Transylvania, Glasgow, 68 bls. bagging.
Castle & Overton, Inc., Transylvania, Glasgow, 46 bls. rags.
Castle & Overton, Inc., Schodack, France, 23 bls. rags.
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International Purchasing Co., Sac City, Rotterdam, 57 bls.
S. Birkenstein & Son, Sac City, Rotterdam, 30 bls.
W. Steck & Co., Collamer, Dunkirk, 40 coils.
International Purchasing Co., Collamer, Dunkirk, 123 bls.
Brown Bros. & Co., Collamer, Havre, 121 bls.
Brown Bros. & Co., Fred. VIII, Copenhagen, 89 coils.
Brown Bros. & Co., Deutschland, Hamburg, 35 coils.
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WOOD PULP

Irving Trust Co., Deutschland, Hamburg, 127 bls. wood pulp, 25 tons.
Castle & Overton, Inc., Deutschland, Hamburg, 2,738 bls. wood pulp, 410 tons.

(Continued on page 64)

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"YOUR PAPER IS MADE IN YOUR BEATERS"

Imports of Paper and Paper Stock

(*Continued from page 62*)

——, Deutschland, Hamburg, 260 bls. wood pulp, 52 tons.
Chemical Bank & Trust Co., Tyrifjord, Tofte, 180 bls. sulphite.
J. Andersen & Co., Tyrifjord, Greaker, 2,160 bls. sulphite.
Atterbury Bros., Inc., Stavangerfjord, Oslo, 500 bls. wood pulp.
Bulkley, Dunton & Co., Tai Ping Yang, ——, 1,750 bls. wood pulp.
Pagel, Horton & Co., Inc., Tai Ping Yang, Gefle, 3,000 bls. sulphite.
Scandinavian Pulp Agency, Inc., Tai Ping Yang, Sundsvall, 1,600 bls. sulphate.
Scandinavian Pulp Agency, Inc., Tai Ping Yang, Sundsvall, 1,125 bls. sulphite.
Perkins, Goodwin & Co., Tai Ping Yang, Sundsvall, 550 bls. sulphite.
Johanson, Wales & Sparre, Inc., Tai Ping Yang, Soraker, 425 bls. sulphite.
J. Andersen & Co., Tai Ping Yang, Svartvik, 300 bls. sulphite.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 599 bls. dry soda pulp.
Johanson, Wales & Sparre, Inc., Gripsholm, Gothenburg, 299 bls. dry soda pulp.
Parsons & Whittemore, Inc., Gripsholm, Gothenburg, 309 bls. sulphite.
Perkins, Goodwin & Co., Gripsholm, Gothenburg, 127 bls. sulphite.
Price & Pierce, Ltd., Gripsholm, Gothenburg, 375 bls. wood pulp.
Bulkley, Dunton & Co., Gripsholm, ——, 600 bls. wood pulp.
O. E. Kiaer, Tampa, Oslo, 800 bls. sulphite.
O. E. Kiaer, Tampa, Greaker, 750 bls. sulphite.
Castle & Overton, Inc., Milwaukee, Hamburg, 1,061 bls. wood pulp.

WOOD PULP BOARDS

Lagerloef Trading Co., Ragnhildsholm, Kotka, 247 rolls, 55 bls.

WOOD FLOUR

B. L. Soberski, Veendam, Rotterdam, 2,000 bags.
State Chemical Co., Veendam, Rotterdam, 1,000 bags.
A. Kramer & Co., Veendam, Rotterdam, 300 bags.
B. L. Soberski, Tyrifjord, Frederickstad, 3,000 bags.
B. L. Soberski, Stavangerfjord, Frederickstad, 2,250 bags.
The Burnet Co., Gripsholm, Gothenburg, 424 bags.
The Burnet Co., Sac City, Rotterdam, 250 bags.

BALTIMORE IMPORTS

WEEK ENDING OCTOBER 19, 1929

Castle & Overton, Inc., Collamer, Havre, 132 bls. rags.
Congoleum Nairn Co., Collamer, Havre, 1,620 bls. rags.
Equitable Trust Co., Collamer, Havre, 532 bags casein.
Congoleum Nairn Co., Collamer, Dunkirk, 885 bls. rags.
S. Shapiro & Son, Collamer, Dunkirk, 100 bls. rags.
Perkins, Goodwin & Co., Tampa, Oslo, 300 bls. wood pulp.
Atterbury & McKelvey, Tampa, Tofte, 2,400 bls. sulphite.
O. E. Kiaer, Tampa, Greaker, 1,000 bls. uslphite.
Castle & Overton, Inc., Mexico, Germany, 4,413 bls. wood pulp.
Castle & Overton, Inc., City of Alton, Germany, 818 bls. wood pulp.
Castle & Overton, Inc., Burgerdyk, Holland, 646 bls. wood pulp.
Castle & Overton, Inc., Rheinland, Germany, 3,150 bls. wood pulp.
Castle & Overton, Inc., Collamer, France, 150 bls. rags.
Castle & Overton, Inc., Schodack, France, 232 bls. rags.

BOSTON IMPORTS

WEEK ENDING OCTOBER 19, 1929

Brown Bros. & Co., Missouri, London, 124 coils old rope.
G. M. Graves & Co., Missouri, London, 32 bls. rags.
T. D. Downing & Co., Missouri, London, 48 bls. rags.
Crocker Burbank Co., Missouri, London, 502 bls. waste paper.
Pagel, Horton & Co., Inc., Ragnhildsholm, Gefle, 3,250 bls. sulphate.
Equitable Trust Co., Ragnhildsholm, Norrsundet, 9,125 bls. sulphate.
——, Ragnhildsholm, Helsingfors, 265 bls. sulphite.
——, Ragnhildsholm, Kotka, 4,582 bls. sulphite.
——, Ragnhildsholm, Kotka, 2,083 bls. sulphate.
——, Ragnhildsholm, Tolkis, 1,100 bls. sulphite.
G. F. Malcolm & Co., Laconia, Liverpool, 22 cs. carbonizing tissue paper.
Bulkley, Dunton & Co., Westpool, ——, 350 bls. wood pulp.
Bulkley, Dunton & Co., Tilthorn, ——, 8,275 bls. wood pulp.
Castle & Overton, Inc., Liguria, Germany, 888 bls. wood pulp.
Castle & Overton, Inc., Burgerdyk, Holland, 1,814 bls. wood pulp.
Castle & Overton, Inc., Harburg, Germany, 541 bls. wood pulp.
Castle & Overton, Inc., Eifel, Germany, 708 bls. wood pulp.
Castle & Overton, Inc., Exermont, Italy, 45 bls. rags.
Castle & Overton, Inc., Westpool, Germany, 72 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING OCTOBER 19, 1929

J. A. Steer & Co., N. Y. City, Bristol, 60 coils old rope.
Castle & Overton, Inc., N. Y. City, Bristol, 120 bls. rags.
Chemical Bank & Trust Co., Tyrifjord, Tofte, 4,200 bls. sulphite.
Philadelphia National Bank, London Corporation, London, 128 bls. rags.
W. Schall & Co., London Corporation, London, 37 bls. old rope.
Castle & Overton, Inc., London Corporation, Dundee, 221 bls. jute.
J. A. Steer & Co., London Corporation, Dundee, 57 bls. waste paper.
Bulkley, Dunton & Co., Holger, ——, 1,250 bls. wood pulp.
Bulkley, Dunton & Co., Tai Ping Yang, ——, 750 bls. wood pulp.
Castle & Overton, Inc., Ambridge, Antwerp, 145 bls. rags.
Castle & Overton, Inc., The Angeles, South America, 177 bls. rags.
Castle & Overton, Inc., Manchester Shipper, England, 47 bls. bagging.
Castle & Overton, Inc., City of Alton, Holland, 340 bls. wood pulp.
Castle & Overton, Inc., Mexico, Germany, 1,609 bls. wood pulp.
Castle & Overton, Inc., Meltonian, Ireland, 114 bls. rags.
Castle & Overton, Inc., Tai Ping Yang, Sweden, 300 bls. wood pulp.
Castle & Overton, Inc., Burgerdyk, Holland, 340 bls. wood pulp.
Castle & Overton, Inc., Rheinland, Germany, 4,452 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING OCTOBER 19, 1929

Castle & Overton, Inc., West Galeron, England, 279 bls. rags.
Castle & Overton, Inc., West Totant, England, 60 bls. rags.
Castle & Overton, Inc., Cranford, France, 146 bls. bagging.
Castle & Overton, Inc., Leerdam, Antwerp, 40 bls. bagging.

NORFOLK IMPORTS

WEEK ENDING OCTOBER 19, 1929

Castle & Overton, Inc., Harburg, Germany, 888 bls. wood pulp.

QUEBEC IMPORTS

WEEK ENDING OCTOBER 19, 1929

Castle & Overton, Inc., Hada County, France, 193 bls. rags.

HAVANA IMPORTS

WEEK ENDING OCTOBER 19, 1929

Castle & Overton, Inc., Orduna, England, 367 bls. jute.

Keystone Wood Chemical Co. in Receivership

[FROM OUR REGULAR CORRESPONDENT]

GLENFIELD, N. Y., October 21, 1929.—The Keystone Wood Chemical and Lumber Corporation was this week placed in equity receivership following a motion made by attorney of the firm in United States Supreme Court at Utica for the appointment of receivers. The liabilities are listed at $1,991,203 and assets at $4,239,692. Following the filing of papers Judge Frederick Bryant appointed Joseph Gokey, of Malone, Roy Brownell, of Williamsport, and Harold Cornwall, of Lowville, as receivers and directed them to continue the business.

Attorneys Quigley and Vedder, of Olean, stated to the court that the company owed its 600 workers upwards of $60,000 and that it was necessary to have a receivership in order that the amount could be raised. As the company was short of liquid assets and suits were threatened a friendly receivership was requested. The court permitted the appointment of Frank Bowman, of Lowville, as attorney to the receivership and George A. Newberry, of Buffalo, as counsel. The company is operating on 20,000 acres of forest land. Its assets include cash $14,808, raw and finished materials, $419,091, timber and lands, $744,573, chemical plant, $1,562,573, saw mill $498,974, dwellings $109,000, railroad, $44,277, half interest in another railroad $75,000 and advance stumpage $73,000. Liabilities are largely notes of which $230,000 are payable to banks. A first montgage amounts to $650,000 and gold notes $500,000.

Consolidated Water Power Expansion

APPLETON, Wis., October 21, 1929.—Although quite a number of enlargements and improvements have been made by the Consolidated Water Power and Paper Company during the last year, building operations are still brisk there. The largest project is an addition to the finishing room at the main mill at Wisconsin Rapids, Wis. It will be 68 by 113 feet in size, with a height of 41 feet. The company is also building a filter plant 52 by 112 feet in size, on top of which will be a mill unit 38 by 52 feet in area. All of these are now in progress of construction and will be of steel, concrete and brick. When finished, the company will be about ready to shift part of its paper machines from news print to ground wood book papers.

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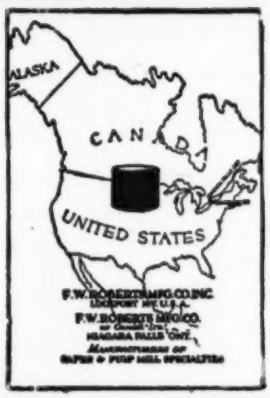
B U R R S



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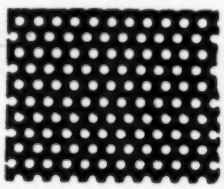

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New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, October 23, 1929.

Demand for the various standard grades of paper was satisfactory during the past week and the local paper market is exhibiting a strong undertone. Supplies continue to move into consumption in good volume. Sales organizations of the leading paper houses are booking numerous orders and are mostly optimistic over the future outlook. Prices rule steady to firm and there is little talk of concessions around.

Production of news print is running at approximately 87 per cent of capacity at North American mills. Consumption is steadily expanding and stocks of news print paper at the mills are not excessive. With reports of increased advertising and circulation of the leading newspapers the immediate outlook is promising. Prices are holding to schedule, without difficulty.

Some improvement was noticed in the demand for the various grades of paper board. Production is being maintained in sufficient volume to take care of current requirements. The price situation remains unchanged. The position of the fine paper market is sound. Tissues are going forward in normal volume for the season. Some improvement was noticed in the coarsre paper market and the wrapping paper movement is expanding.

Mechanical Pulp

Steadiness prevails in the ground wood market. Due to recently curtailed operations in this country and abroad offerings are rather scarce. Shipments against contract are proceeding in fairly satisfactory volume under the circumstances. Prices are holding to the levels which have been maintained for some considerabl time past and shading is infrequent.

Chemical Pulp

Conditions in the chemical pulp market are practically unchanged. The feature of the industry is the continued strength of strong unbleached and easy bleaching grades of sulphite pulp. Imported and domestic bleached sulphite is moderately active and there is some interest being displayed in kraft pulp. Prices of the various grades are steady to firm, in most instances.

Old Rope and Bagging

Business in the old rope market was fairly active during the past week. Both imported and domestic old manila rope continue in excellent request, with offerings limited and prices steady to firm. Mixed rope is in persistent demand. Most of the business transacted in the bagging market was along routine lines. No. 1 scrap bagging is steady and there is a fair call for roofing bagging.

Rags

Trading in the domestic rag market was mostly seasonal during the past week. Cotton cuttings are moving to the fine paper mills in better volume than of late. Roofing rags are in fair request at present and mixed rags continue steady. Prices of the various grades are practically unchanged. The foreign rag market is still rather quiet although dark cottons are in better request.

Waste Paper

With the board mills displaying little interest in the paper stock market, the lower grades of waste paper are unusually weak for the time of the year. Some improvement was noticed in the demand for book and ledger stock. Soft white shavings continue very steady. Old kraft machine compressed bales are moving in satisfactory volume. Prices on the various grades are unchanged.

Twine

No radical changes were reported in the local twine market. Demand for the various grades is gradually expanding with the approach of the Christmas holidays and the outlook for the closing months of the year is decidedly encouraging. Although competition for desirable orders is keen, prices are holding to schedule.

SUPERINTENDENTS MEET

(*Continued from page 21*)

response by James G. Ramsey, president of the Superintendents Association. A number of papers and reports were also discussed at the morning session.

In the afternoon, there was further discussion of papers and reports, the election of officers and reminiscenses by Fred Boyce, "Father of the association."

F. Roger Miller, acted as toastmaster at the banquet and among those speaking were included; L. D. Nicholson, of the District of Columbia Paper Company, this city, who talked on "Cooperation Aided by Meetings of Pivot Men"; Henry L. Bert, of the Monroe Paper Products Company, Monroe, Mich.; who spoke on "Use of Bandless Jordan Plugs"; W. L. Glass, Tolhurst Machine Works, Troy, N. Y., on "Cleaning and Preparation of Paper Stock for Centrifugals"; and W. G. Dennison, Paper-Textile Machinery Company, Sandusky, Ohio, who talked on "A New Era in the Manufacture of Paper."

Bids and Awards for Government Paper

WASHINGTON, D. C., October 23, 1929.—The Government Printing Office has received the following bids for 10,000 pounds of white sulphite writing paper: Old Dominion Paper Company, at 6.73 cents per pound; Whitaker Paper Company, 5.8 cents; Barton, Duer & Koch Paper Company, 5.95 cents; and Import Paper Company, 6.8 cents.

The Old Dominion Paper Company has been awarded the contract for furnishing the Government Printing Office with 33,500 pounds (250,000 sheets) of 24x38—134, 75 per cent rag laid antique book paper at 15.98 cents per pound, bids for which were received on October 2.

The Worthy Paper Company will furnish 9,517 pounds (31,000 sheets) of 38x48—307, 75 per cent rag book paper at 24 cents per pound, bids for which were received on September 30.

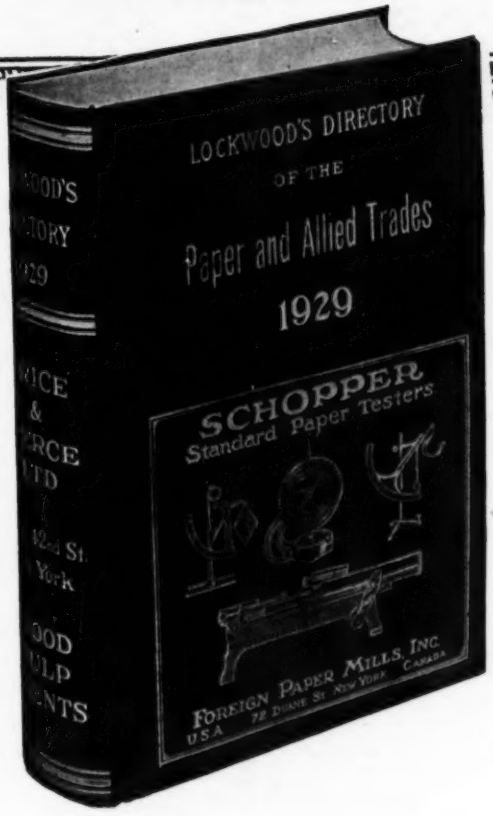
Barton, Duer & Koch Paper Company have been awarded the contract for furnishing the Government Printing Office with 40,000 pounds of manila and green calendered tag board in 23½ inch rolls at 7.2 cents and 7.84 cents respectively.

The Whitaker Paper Company will furnish 36,000 pounds of white sulphite writing paper in 17 inch rolls at 5.8 cents per pound.

Cauthorne Paper Company will furnish 5,000 pounds (65,000 sheets) of 24x38—No. 32 pink sulphite bond paper at 7.65 cents.

Reese & Reese will furnish 3,830 pounds (10,525 seets) of high finish red sulphite paper at 10.595 cents. The R. P. Andrews Paper Company will furnishs 825 pounds (5,000 sheets) of 26x43 inch sensitized paper at $61.30 per M sheets. Bids for all of these items were received on October 11.

LOCKWOOD'S DIRECTORY
OF THE
PAPER *and* ALLIED TRADES
1929 *Edition*



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Published by

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New York, N. Y., U. S. A.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, October 23, 1929.

BLANC FIXE.—Conditions in the blanc fixe market are satisfactory. Both the pulp and the powder are in good demand. Prices are holding to schedule. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The position of the bleaching powder market is practically unchanged. Shipments against contract are moving in seasonal volume. Prices are generally holding to previously quoted levels. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Moderately active trading prevailed in the casein market. Domestic casein is still quoted at from 16 cents to 18 cents per pound. Argentine standard ground is selling at from 16 cents to 16½ cents, and finely ground at from 16½ cents to 17 cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Steadiness prevails in the caustic soda market. The contract movement is well up to average. Prices remain unchanged. Solid caustic soda is quoted at from $2.90 to $2.95 and the flake and the ground at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—The china clay market is exhibiting a strong undertone. Contract shipments are going forward to the mills in good volume. Imported china clay is still quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—Demand for chlorine was moderately active during the past week. The contract movement was well maintained. Prices are holding to schedule. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation is 3¼ cents per pound.

ROSIN.—The rosin market was irregular, although prices are little changed. The grades of gum rosin used in the paper mills are quoted at from $9.35 to $9.40 per 280 pounds, in barrels, on dock. Wood rosin is still selling at from $7.00 to $8.05 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Available supplies of salt cake are rather scarce and the market is decidedly firm at present. Contract shipments are going forward in good volume. Salt cake is quoted at from $18 to $21 per ton, while chrome salt cake is selling at from $15 to $16 per ton, in bulk, at works.

SODA ASH.—Trading in the soda ash market was fairly active. Supplies are moving into consumption at a steady pace. Prices are holding to previously recorded levels, in most instances. Contract quotations on soda ash, in car lots, at works, are as follows: in bags, $1.32½, and in barrels, $1.55.

STARCH.—The undertone of the starch market is strong. Shipments against contract are moving at a normal pace for the time of year. Prices are holding to schedule. Special paper making starch is quoted at $3.92 per 100 pounds, in bags, and at $4.19 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Offerings of sulphate of alumina are about sufficient to take care of current requirements. Prices are holding to previously recorded levels. Commercial grades are quoted at from $1.40 to $1.55 and iron free at from $1.90 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Contract shipments of sulphur continue to move in excellent volume. Sulphur is still quoted at $18 per ton, at mine, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—The talc market pursues the even tenor of its way. Demand for this product is mostly routine. Prices continue steady and unchanged. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is selling at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@40.00
Straw	52.50	@55.00
Chip	35.00	@37.50
Binders' Boards	65.00	@70.00
Wood Pulp	80.00	@85.00
65 Test Jute Liner	52.50	@ —
85 Test Jute Liner	55.00	@ —
Sgl. Mla. Ll. Chip	47.50	@50.00

Mechanical Pulp

(On Dock)

No. 1 Imported—		
Moist	30.00	@32.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.25
Easy Bleaching	3.00	@ 3.15
No. 1 strong unbleached	2.75	@ 3.00
Mitscherlich unbleached	2.80	@ 3.25
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.35	@ 2.65
No. 2 Kraft	2.30	@ 2.50
Sulphate—		
Bleached	3.60	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.65	@ 3.00
News Sulphite	2.50	@ 2.70
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.10	@ 3.30
Soda Bleached	3.10	@ 3.25
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.50	@ 8.00
Washables	4.75	@ 5.25
Fancy	5.75	@ 6.25
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.50	@ 8.25
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	2.00	@ 2.10
Dutch Blue Cottons	2.25	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.55	@ 1.60
Old Shopperies	1.50	@ 1.55
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.40	@ 4.60
Domestic	4.75	@ 5.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.60	@ 2.70
White envelope cuttings	3.00	@ 3.50
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag.	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.57½	@ .60
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.85	@ 2.00
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.75	@ .80
Strictly Folded	.60	@ .65
No. 1 Mixed Paper	.45	@ .50
Common Paper	.30	@ .35

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10 EAST 39TH ST.
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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.25	@	1.35
Solid Books	1.25	@	1.30
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.75	@	.80
Folded News (overissue)	.80	@	.85
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.60	@	.65
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	40.00	@	40.00
Chip Board	38.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.02	@	.03½
New	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03¼
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.80	@	1.90
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.40	@	1.50
No. 2 Books, light	1.05	@	1.15
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.60	@	.65
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.80	@	.85
Old Newspaper	.50	@	.55

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.02½	@	.04¼
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¼	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.04½	@	.05½
Common Bogus	.02	@	.02¼
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	50.00	@	—
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00

(F. o. b. Mill)

Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.75	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	.45	@	.50
Overissue News	.70	@	.75
Old Newspapers	.55	@	.57½
Box Board, Chip	.55	@	.60

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.50
Manila Rope—			
Foreign	4.50	@	—
Domestic	—	@	4.75
Transmission Rope	—	@	3.00
Mixed Strings	1.00	@	—
Jute Wool Strings	1.00	@	1.05
Jute Carpet Threads	1.05	@	1.15
Scrap Burlaps	1.37½	@	1.50
Scrap Sisal	1.80	@	2.00
Scrap Sisal for shredding	1.85	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	3.00	@	3.12½

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	—	@	1.55
New No. 1 Shirt Cuttings	9.00	@	9.50
Dutch Blues	2.00	@	2.12½
Lace Curtains	4.75	@	5.00
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.80	@	1.85

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	77.00	@	78.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.10	@	.10¼
Fancy Shirt Cuttings	.05¼	@	—

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-EIGHTH YEAR

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